Plankton Dynamics in Bedford Basin, Nova Scotia; Phytoplankton Productivity Experiments and Nutrient Measurements from February 13, 1978 to March 14, 1979

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March 1983

Canadian Data Report of Fisheries and Aquatic Sciences No. 272

Canadian Data Report of Fisheries and Aquatic Sciences

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Canadian Data Report

Fisheries and Aquatic Sciences No. 272

PLANKTON DYNAMICS IN BEDFORD BASIN, NOVA SCOTIA: PHYTOPLANKTON PRODUCTIVITY EXPERIMENTS AND NUTRIENT MEASUREMENTS FROM FEBRUARY 13, 1978 UNTIL MARCH 14, 1979

by

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This is the eleventh Data Report from the Marine Ecology Laboratory.

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Cat. No. Fs 97-13/272 ISSN 0706-6465

Correct citation for this publication:

Irwin, B., W.G. Harrison and T. Platt. 1983. Plankton dynamics in Bedford Basin, Nova Scotia: Phytoplankton productivity experiments and nutrient measurements from February 13, 1978 until March 14, 1979. Can. Data Rept. Fish. Aquat. Sci. No. 272: 175 p.

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ABSTRACT

Irwin, B., W.G. Harrison and T. Platt. 1983. Plankton dynamics in Bedford Basin, Nova Scotia: Phytoplankton productivity experiments and nutrient measurements from February 13, 1978 until March 14, 1979. Can. Data Rept. Fish. Aquat. Sci. No. 272: 175 p.

The relationship between light intensity and photosynthetic productivity of natural phytoplankton populations was examined in a series of experiments on samples from Bedford Basin (63°38'30"W, 44°41'30"N). The sampling period was from April 14, 1978 until March 14, 1979. In this report experimental raw data and corresponding nutrient measurements are presented along with the fitted light saturation parameters and their confidence limits.

RESUME

Irwin, B., W.G. Harrison and T. Platt. 1983. Plankton dynamics in Bedford Basin, Nova Scotia: Phytoplankton productivity experiments and nutrient measurements from February 13, 1978 until March 14, 1979. Can. Data Rept. Fish. Aquat. Sci. No. 272: 175 p.

Nous avons étudié, dans une série d'essais sur des échantillons provenant du bassin Bedford, la relation entre l'intensité lumineuse et la productivité photosynthétique de populations naturelles de phytoplancton (63°38'30"W, 44°41'30"N). La période d'échantillonnage s'étendit du 14 avril 1978 au 14 mars 1979. Le rapport qui suit contient les données expérimentales brutes et les dosages d'éléments nutritifs qui y correspondent, ainsi que les paramètres ajustés de saturation lumineuse avec leurs limites de confiance.

INTRODUCTION

This the fourth in a series of data reports giving the results of experiments on photosynthetic production versus light intensity for natural phytoplankton populations of Nova Scotia coastal waters.

Samples were taken from Bedford Basin, a small (17 km^2) deep (70 m) marine basin connected to the Atlantic Ocean through the narrow Halifax harbour channel (10 km long, 20 m sill depth). This basin receives untreated industrial and domestic sewage effluent from an urban community of approximately 55,000 people.

The results of in situ and laboratory experiments are presented along with corresponding physical and chemical data. The calculated photosynthetic parameters of the light saturation curves (phytoplankton production rates versus light intensity) are given together with their 90% confidence limits. A full discussion of the mathematical basis for these calculations is given in Irwin et al. (1980).

SAMPLING

All water samples were collected at the compass buoy, Bedford Basin 44°31.3'N, 63°38.3'W (Fig. 1). Water depth at this location was 71 m. Samples were collected three times a week from 13 February 1978 to 14th April 1978 - the apparent end of the spring bloom. Weekly samples were collected from 14th April 1978 to 16 August 1978 when a six week gap in sampling occurred due to commitments on other programmes. When sampling recommenced on September 17, 1978, water was collected twice a month until the 14th of March 1979.

A 30 l Niskin water sampler was used to collect water for all

phytoplankton productivity samples and chemical analyses. Sampling depths were 5 m and the 1% light level as ascertained from a secchi depth reading.

Knudsen bottles fitted with reversing thermometers were used to collect water for salinity determinations. Sampling depths were 1, 5, 10, 15, 20, 25, 30, 40, 50, 60 and 70 m. In situ fluorescence profiles were made from the surface to 17 m by pumping water through a Turner continuous flow fluorometer fitted with a red sensitive photomultiplier.

METHODS

Productivity

Phytoplankton productivity was measured using the ^{14}C method of Strickland and Parsons (1972). In situ measurements were made for both the 5 m and 1% light level. For each depth, three light and one dark bottle were innoculated with 1 ml of sodium bicarbonate ^{14}C having an approximate activity of 5 µCi. Bottles were then incubated for four hours at the appropriate depth.

For light saturation experiments two different arrangements of light bottles in the incubators were used. From April 14, 1978 to August 16, 1978, 20 light and 2 dark bottles for each depth were innoculated with ^{14}C and placed at regular intervals in temperature controlled incubators illuminated with 150 W floodlights (GTE Sylvania PAR 150). The maximum light intensity in these incubators was approximately 200 W m^{-2} (PAR). In addition 18 light and 2 dark bottles per depth were innoculated and incubated in temperature controlled incubators illuminated by 2000 watt Tungsten-halogen lamps (New Haline OHS 2000). These had a maximum light intensity of approximately 1000 W m^{-2} (PAR).

From September 27, 1978 until March 14, 1979 the number of bottles in the high light intensity (super-saturation) incubators was doubled. The arrangement of bottles was altered so as to yield a higher number of bottles exposed to very high light conditions, see Figure 2. In all incubators temperature was controlled by running sea water pumped from a depth of 5 m in Bedford Basin.

The incubation time in all cases was approximately four hours. Samples were then filtered onto 2.5 cm diameter 0.45 μm pore size membrane filters (Millipore) which were dried in a dessicator and stored at -20°C. Filters were later thawed, exposed to HCl fumes and counted in a Scintillation Counter.

Chlorophyll a

Duplicate 1 litre samples were filtered onto 5.5 cm glass fibre filters and stored in a dessicator at -20°C. These filters were later thawed and analysed using the fluorometric technique of Yentsch and Menzel (1963) as modified by Holm-Hansen et al. (1965). Acetone extracts of pure chlorophyll a (Sigma Chemical Co.) were used to calibrate the fluorometer.

Incubator Light Intensity

From April 14, 1978 until August 16, 1978 the photosynthetically active radiation (PAR) in each compartment of the incubators was measured using an Eppley 40 Junction pyrheliometer. Measurements were made from September 27, 1978 to March 14, 1979 using a Licor Li 185A Quantum meter equipped with a 190S underwater quantum sensor.

Nutrients

Four inorganic nutrients were routinely measured from each depth sampled. Three of them, phosphate, nitrate and silicate, were stored frozen at -20°C and later measured on a Technicon II autoanaylzer using the following methods:

Phosphate - industrial method 155-71W

Nitrate - industrial method 158-71W

Silicate - industrial method 186-72W

The fourth nutrient, ammonia, was measured immediately after collection using the phenolhypochlorite method of Solorzano (1969).

Nucleic Acids

Replicate 1 litre samples were filtered onto 5.5 cm glass fibre filters (Reeve Angel 934H) and stored at -20°C in a desiccator. The frozen filters were homogenized in buffered sodium chloride solution at 0°C and then centrifuged. The clear supernatant was transferred to a test tube and an equal volume of the dye Ethidium Bromide was added with vigorous mixing. The fluorescence of this mixture was measured on a Model III Turner fluorometer (Excitation filter Corning 7-60, Emission filter Wratten 23A). This was a measure of Ribonucleic acid (RNA) and Deoxyribonucleic acid (DNA). RNAse solution, 0.04 ml, was added to the test tube, mixed and incubated at 50°C for 60 min. The fluorescence was remeasured. This second reading was a measure of DNA concentration only.

Adenosine Triphosphate (ATP)

Replicate 100 ml samples were filtered onto 2.4 cm glass fibre

filters (Whatman GF/C) and immediately placed into 10 ml test tubes containing 5 ml of boiling tris buffer. After 3 min the tubes were cooled to room temperature then stored at -20°C. ATP concentrations were estimated using the technique described in Strickland and Parsons (1972) using an SAI Model 2000 integrating photometer.

Particulate Carbon

Replicate 500 ml samples were filtered onto previously baked 2.4 cm glass fibre filters (Whatman GF/C) and sucked dry. Filters were then folded, placed in aluminum foil wrappers and stored at -20°C. Filters were freeze dried overnight before combustion in a Hewlett-Packard Model 185B CHN analyzer.

ESTIMATION OF PHOTOSYNTHETIC PARAMETERS

Measurements of specific production, P^B, and irradiance, I, were used to estimate parameters in the equation of Platt et al. (1981),

$$P^B = P_s \left(1 - e^{-\alpha I/P_s}\right) e^{-\beta I/P_s} \qquad (1)$$

P_s (mg C mg Chl^{-1} h^{-1}) is the light-saturated rate of specific production in the absence of photo-inhibition, α(mg C [mg Chl]$^{-1}$ h^{-1} W^{-1} m^2) is the initial slope of the P-I curve, and β (same units as α) is a parameter that characterizes the photo-inhibition. All three parameters were estimated simultaneously using the modified Gauss-Newton method (Bard 1974). The method requires initial or trial estimates of the parameters, which were obtained as follows. The initial slope, α, was estimated by a linear regression of those points with $I \leq 25$ W m^{-2}. P_s was estimated as the

highest observed value of P^B, and β was initially set to 10^{-5}. All three parameters were then fitted simultaneously.

ACKNOWLEDGEMENTS

We wish to thank Paul Dickie, Mark Hodgson, Pat Evans and Leslie Harris for their technical assistance throughout this project. We also wish to thank Dave Rudderham for his assistance in the calculation of the light saturation parameters.

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TABLE LEGEND I

LIGHT SATURATION DATA AND RELATED BIOMASS AND NUTRIENT MEASUREMENTS

SYMBOLS AND ABBREVIATIONS

P = mg C $m^{-3}h^{-1}$(mg Chl)$^{-1}$

I = W m^{-2}

P_s = mg C(mg Chl)$^{-1}h^{-1}$

Alpha = mg C(mg Chl)$^{-1}h^{-1}W^{-1}m^{-2}$

Beta = mg C(mg Chl)$^{-1}h^{-1}W^{-1}m^{-2}$

Organic particulate concentrations are in mg m^{-3} and nutrients are in mg at m^{-3}.

The 90% confidence interval for P_s, α and β are shown in the closed brackets below the estimates for each parameter.

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 13 02 78 DEPTH 5M

I	P	I	P	I	P	I	P
491.2	1.18	309.2	1.21	201.0	1.12	107.4	.88
78.5	1.05	57.2	.81	36.8	.64	29.2	.43
15.7	.42	15.0	.37	8.0	.18	7.7	.19
4.3	.09	3.4	.12	2.1	.03	1.6	.05
1.4	.02	1.0	.03	.0	.01		

PARAMETER VALUES

PS : 1.16 ALPHA : .025 BETA : .0000

(1.05, 1.26) (.023, .027) (-.0003, .0003)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL	: 1.52	RNA	:	7.97	PHOSPHATE	:	.65
CARBON	:204.80	DNA	:	2.43	NITRATE	:	7.27
NITROGEN	: 24.45	ATP	:	-	SILICATE	:	10.62
					AMMONIA	:	.40

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 13 02 78 DEPTH 21M

I	P	I	P	I	P	I	P
884.5	1.51	733.8	1.62	484.9	1.56	467.5	1.48
462.4	1.42	228.3	.81	203.0	1.11	181.2	1.15
167.8	.71	108.5	.66	95.5	.86	80.5	.56
79.5	.27	71.0	.69	63.2	.17	52.3	.74
30.3	.52	28.7	.64	15.3	.44	15.0	.33
8.0	.14	7.7	.21	4.3	.13	3.8	.06
1.8	.08	1.8	.03	1.4	.01	1.0	.01
.0	.03						

PARAMETER VALUES

PS : 1.54	ALPHA : .009	BETA : .0000
(.97, 2.12)	(.008, .011)	(-.0008, .0008)

SAMPLE TEMPERATURE 1.4 C INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL : 1.25	RNA : 11.04	PHOSPHATE : .66
CARBON :191.80	DNA : 3.98	NITRATE : 7.39
NITROGEN : 25.60	ATP : -	SILICATE : 11.12
		AMMONIA : .53

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 15 02 78 DEPTH 5M

I	P	I	P	I	P	I	P
480.7	1.27	449.7	1.31	288.4	1.48	192.7	1.56
124.5	1.35	81.0	1.76	54.1	1.23	37.6	1.06
26.0	.59	15.0	.26	14.1	.40	8.4	.26
6.9	.23	5.2	.23	3.4	.09	2.4	.11
2.1	.08	1.5	.02	1.5	.02	.0	.01

PARAMETER VALUES

PS : 1.94 ALPHA : .037 BETA : .0017

(1.70, 2.18) (.033, .041) (.0009, .0026)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL	2.32	RNA	:	10.11	PHOSPHATE	:	.58
CARBON	143.40	DNA	:	3.85	NITRATE	:	6.91
NITROGEN	21.50	ATP	:	.71	SILICATE	:	10.62
					AMMONIA	:	.36

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 15 02 78   DEPTH 21M

I	P	I	P	I	P	I	P
503.1	2.21	395.5	2.87	203.0	3.13	200.0	2.47
84.9	2.58	74.7	2.83	42.6	2.04	31.9	1.64
21.7	1.24	12.8	.71	11.9	.43	7.7	.44
6.6	.44	4.8	.20	4.3	.13	2.9	.08
1.6	.12	1.6	.02	.0	.10	.0	.06

PARAMETER VALUES

PS : 3.48   ALPHA : .070   BETA : .0027

(3.13, 3.83)   (.064, .076)   (.0014, .0039)

SAMPLE TEMPERATURE 1.4 C   INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL :	1.48	RNA :	11.31	PHOSPHATE :	.67
CARBON :	295.30	DNA :	4.64	NITRATE :	7.24
NITROGEN :	28.80	ATP :	.50	SILICATE :	11.04
				AMMONIA :	.50

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 17 02 79 DEPTH 5M

T	P	I	P	T	P	I	P
494.8	1.64	460.9	1.61	289.6	1.53	196.5	1.86
119.1	1.32	79.0	1.18	59.9	1.35	33.5	1.06
32.5	.94	16.3	.50	13.2	.43	9.5	.28
7.3	.26	6.0	.14	3.8	.12	2.9	.05
2.7	.05	2.1	.02	1.8	.03	1.6	.02

PARAMETER VALUES

PS : 1.61 ALPHA : .039 BETA : .0000

(1.47, 1.76) (.035, .043) (-.0004, .0004)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL :	6.48	RNA :	20.41	PHOSPHATE :	.62
CARBON :	86.60	DNA :	11.18	NITRATE :	7.09
NITROGEN :	15.80	ATP :	.90	SILICATE :	11.20
				AMMONIA :	.27

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 02 17 78 DEPTH 15M

I	P	I	P	I	P	I	P
389.4	1.52	373.7	1.80	201.3	1.50	147.0	1.64
77.6	1.44	64.8	1.28	46.3	1.29	25.4	.64
21.7	.83	13.2	.48	12.2	.29	7.3	.24
6.3	.12	4.8	.13	2.9	.07	2.7	.05
2.1	.03	1.6	.04	1.0	.01		

PARAMETER VALUES

PS : 1.56	ALPHA : .041	BETA : .0001
(1.49, 1.82)	(.037, .045)	(-.0005, .0006)

SAMPLE TEMPERATURE 1.4 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL :	4.43	RNA :	11.44	PHOSPHATE :	.55
CARBON :	163.30	DNA :	4.47	NITRATE :	6.19
NITROGEN :	28.20	ATP :	.78	SILICATE :	9.56
				AMMONIA :	.23

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 20 02 78   DEPTH 5M

I	P	I	P	I	P	I	P
479.3	2.04	474.5	1.38	332.2	1.88	216.0	1.90
119.6	2.30	80.0	2.09	61.1	2.09	35.5	1.38
34.5	1.23	17.5	.67	16.0	.81	11.2	.46
9.2	.34	8.4	.25	5.8	.16	5.5	.11
3.4	.05	2.9	.01	1.8	.01	1.5	.05

PARAMETER VALUES

PS : 2.79   ALPHA : .054   BETA : .0031

(2.41, 3.16)   (.049, .060)   (.0016, .0045)

SAMPLE TEMPERATURE 1.2 C   INCUBATION TEMPERATURE 2.8 C

CHLOROPHYLL	: 3.74	RNA	:	10.64	PHOSPHATE	:	.61
CARBON	:136.20	DNA	:	3.48	NITRATE	:	7.20
NITROGEN	: 24.20	ATP	:	1.22	SILICATE	:	11.27
					AMMONIA	:	.52

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 20 02 78 DEPTH 15M

I	P	I	P	I	P	I	P
480.4	1.57	429.4	1.33	238.4	2.04	193.1	1.47
78.5	1.47	71.6	1.98	40.6	1.11	28.1	.91
19.1	.75	13.5	.49	11.2	.39	8.0	.36
6.9	.20	4.8	.14	4.8	.13	2.7	.06
2.7	.08	1.8	.05	1.5	.06	1.0	.03

PARAMETER VALUES

PS : 2.18	ALPHA : .045	BETA : .0019
(1.86, 2.50)	(.040, .050)	(.0007, .0031)

SAMPLE TEMPERATURE 1.4 C INCUBATION TEMPERATURE 2.8 C

CHLOROPHYLL	:	3.28	RNA	:	10.55	PHOSPHATE	:	.57
CARBON	:	127.00	DNA	:	2.73	NITRATE	:	7.13
NITROGEN	:	22.10	ATP	:	1.01	SILICATE	:	10.82
						AMMONIA	:	.36

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 22 02 78 DEPTH 5M

I	P	I	P	I	P	I	P
512.6	1.72	467.3	1.27	257.2	1.79	107.9	2.08
95.5	1.31	59.4	1.72	39.5	1.07	33.0	1.13
17.2	.70	16.0	.66	11.2	.42	9.5	.29
7.3	.17	5.2	.19	3.8	.09	2.9	.07
2.1	.04	1.8	.01	1.6	.04		

PARAMETER VALUES

PS : 2.25 ALPHA : .044 BETA : .0019

(1.89, 2.62) (.039, .050) (.0006, .0031)

SAMPLE TEMPERATURE .9 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL	: 6.33	RNA	:	21.34	PHOSPHATE	:	.50
CARBON	:159.70	DNA	:	7.05	NITRATE	:	6.40
NITROGEN	: 29.80	ATP	:	1.47	SILICATE	:	10.48
					AMMONIA	:	.11

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 22 02 78 DEPTH 13M

I	P	I	P	I	P	I	P
480.5	1.30	450.6	1.73	206.2	2.01	188.8	2.44
85.8	1.86	72.4	1.33	39.5	1.12	27.0	1.06
19.8	.58	13.2	.53	11.6	.39	7.7	.19
6.6	.33	6.0	.10	4.3	.03	3.8	.13
2.9	.01	2.4	.09	1.8	.02	1.5	.00

PARAMETER VALUES

PS : 4.12	ALPHA : .035	BETA : .0087
(2.79, 5.44)	(.032, .038)	(.0030, .0144)

SAMPLE TEMPERATURE 1.0 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL : 5.73	RNA : 22.14	PHOSPHATE : .52
CARBON :239.60	DNA : 7.11	NITRATE : 6.46
NITROGEN : 32.90	ATP : 2.54	SILICATE : 10.48
		AMMONIA : .07

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 24 02 78 DEPTH 5M

T	P	T	P	T	P	T	P
506.9	3.10	233.6	2.66	99.6	2.08	85.8	1.82
50.6	1.36	39.5	1.07	27.0	.71	15.3	.56
14.4	.43	10.2	.16	6.0	.31	6.0	.08
3.1	.02	2.7	.16	1.5	.00	1.5	.10
1.0	.01	.0	.02				

PARAMETER VALUES

PS : 3.04	ALPHA : .033	BETA : .0000
(2.68, 3.40)	(.031, .035)	(-.0008, .0008)

SAMPLE TEMPERATURE 1.0 C INCUBATION TEMPERATURE 1.3 C

CHLOROPHYLL :	4.85	RNA :	16.39	PHOSPHATE :	.56
CARBON :	161.20	DNA :	5.24	NITRATE :	6.60
NITROGEN :	29.40	ATP :	1.24	SILICATE :	11.01
				AMMONIA :	.04

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 24 02 78 DEPTH 15M

I	P	I	P	I	P	I	P
479.8	2.02	434.2	1.90	219.2	1.99	178.0	1.72
38.6	1.50	67.3	1.36	47.4	1.12	30.3	.95
23.0	.62	13.2	.32	12.2	.63	9.2	.19
6.0	.08	6.3	.31	5.2	.04	3.8	.13
3.4	.00	2.9	.05	1.8	.02	1.5	.02

PARAMETER VALUES

PS : 1.95	ALPHA : .035	BETA : .0000
(1.75, 2.14)	(.032, .038)	(-.0005, .0005)

SAMPLE TEMPERATURE 1.1 C INCUBATION TEMPERATURE 1.3 C

CHLOROPHYLL	: 4.52	RNA	:	13.45	PHOSPHATE	:	.52
CARBON	:169.70	DNA	:	3.43	NITRATE	:	5.79
NITROGEN	: 30.30	ATP	:	1.03	SILICATE	:	9.86
					AMMONIA	:	.22

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 27 02 78 DEPTH 5M

T	P	I	P	T	P	I	P
518.6	2.23	450.0	1.71	265.1	2.08	179.7	1.87
89.0	1.55	86.7	2.01	48.9	1.53	31.9	1.41
21.7	.77	13.5	.58	12.2	.34	10.6	.29
8.0	.33	5.2	.15	3.1	.17	2.7	.05
1.8	.06	1.6	.01	1.4	.01	.0	.01

PARAMETER VALUES

PS : 1.99	ALPHA : .051	BETA : .0000
(1.79, 2.19)	(.045, .057)	(-.0005, .0005)

SAMPLE TEMPERATURE 1.0 C INCUBATION TEMPERATURE 2.0 C

CHLOROPHYLL	: 6.39	RNA	: 19.20	PHOSPHATE	: .46
CARBON	:150.60	DNA	: 5.85	NITRATE	: 5.62
NITROGEN	: 29.60	ATP	: 1.38	SILICATE	: 10.48
				AMMONIA	: .52

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 27 02 78 DEPTH 17M

T	P	T	P	T	P	T	P
458.0	1.85	433.8	2.31	220.5	2.42	186.2	2.41
80.7	2.15	64.8	2.18	47.0	1.11	30.9	1.05
21.7	.73	12.8	.56	12.5	.35	8.4	.27
7.7	.35	6.3	.13	4.3	.15	3.1	.09
2.1	.08	2.1	.03	1.5	.07	1.0	.01

PARAMETER VALUES

PS : 3.43	ALPHA : .043	BETA : .0039
(2.82, 4.05)	(.040, .047)	(.0017, .0062)

SAMPLE TEMPERATURE 1.2 C INCUBATION TEMPERATURE 2.0 C

CHLOROPHYLL	:	5.18	RNA	:	9.84	PHOSPHATE	:	.49
CARBON	:	157.90	DNA	:	2.21	NITRATE	:	5.69
NITROGEN	:	29.20	ATP	:	1.21	SILICATE	:	10.04
						AMMONIA	:	.25

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 1 03 78   DEPTH 5M

T	P	I	P	T	P	T	P
507.3	1.59	446.5	1.74	319.2	1.70	181.4	1.79
109.5	1.60	58.5	1.75	56.3	1.36	28.7	.87
27.0	.96	15.7	.68	14.1	.38	11.6	.26
9.9	.28	6.9	.14	5.2	.15	3.8	.07
3.8	.04	3.1	.01	2.9	.08	2.7	.01

PARAMETER VALUES

PS : 2.03	ALPHA : .043	BETA : .0009
(1.80, 2.25)	(.039, .047)	(.0002, .0016)

SAMPLE TEMPERATURE 1.1 C   INCUBATION TEMPERATURE 2.3 C

CHLOROPHYLL :	6.03	RNA :	12.25	PHOSPHATE :	.45
CARBON :	133.40	DNA :	2.54	NITRATE :	5.32
NITROGEN :	24.00	ATP :	1.12	SILICATE :	9.86
				AMMONIA :	.32

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 1 03 78   DEPTH 15M

I	P	I	P	I	P	I	P
475.3	1.69	442.1	1.75	230.7	1.53	186.0	1.54
89.3	1.44	73.7	1.52	44.6	1.18	39.2	1.18
20.9	.64	14.4	.56	12.8	.38	7.7	.30
7.3	.21	6.3	.13	5.5	.12	3.9	.05
3.4	.09	2.9	.01	2.4	.00	1.6	.02

PARAMETER VALUES

PS : 1.66   ALPHA : .042   BETA : .0000

(1.54, 1.77)   (.039, .045)   (-.0003, .0003)

SAMPLE TEMPERATURE 1.1 C   INCUBATION TEMPERATURE 2.3 C

CHLOROPHYLL :	5.70	RNA :	10.24	PHOSPHATE :	.43
CARBON :	165.80	DNA :	2.44	NITRATE :	5.59
NITROGEN :	31.40	ATP :	1.28	SILICATE :	9.34
				AMMONIA :	.50

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 3 03 78 DEPTH 5M

T	P	T	P	T	P	I	P
497.5	1.68	441.3	1.53	275.2	1.61	187.6	1.55
96.8	1.58	65.1	1.52	55.4	1.39	33.0	.88
30.3	.96	16.3	.53	11.2	.45	7.7	.25
6.3	.11	5.2	.26	3.1	.04	3.1	.04
1.8	.01	1.8	.01	1.5	.01		

PARAMETER VALUES

PS : 1.73	ALPHA : .044	BETA : .0003
(1.61, 1.85)	(.041, .047)	(0.0000, .0007)

SAMPLE TEMPERATURE .9 C INCUBATION TEMPERATURE 1.6 C

CHLOROPHYLL	: 5.15	RNA	: 11.04	PHOSPHATE	: .46
CARBON	:173.60	DNA	: 3.60	NITRATE	: 5.46
NITROGEN	: 32.60	ATP	: 1.26	SILICATE	: 9.42
				AMMONIA	: 1.12

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 03 03 78   DEPTH 15M

I	P	I	P	I	P	I	P
871.8	1.28	737.1	1.70	670.6	1.81	523.6	1.98
505.2	1.86	459.3	1.96	450.5	1.96	434.2	1.74
381.3	2.06	344.9	2.30	236.9	1.89	223.1	2.07
211.1	1.84	186.2	2.38	172.9	2.06	147.4	2.10
139.1	1.93	135.1	2.35	92.3	2.02	91.9	1.51
71.6	1.98	70.7	1.58	64.4	1.90	61.1	1.54
48.1	1.26	30.3	1.23	23.0	.64	14.7	.58
13.5	.43	7.7	.29	7.3	.22	6.3	.18
5.5	.12	4.3	.05	3.4	.02	3.1	.08
2.9	.06	2.1	.02				

PARAMETER VALUES

PS : 2.47	ALPHA : .043	BETA : .0014
(2.33, 2.62)	(.040, .047)	(.0010, .0018)

SAMPLE TEMPERATURE 1.1 C   INCUBATION TEMPERATURE 1.6 C

CHLOROPHYLL	4.82	RNA	14.38	PHOSPHATE	.57
CARBON	168.60	DNA	3.75	NITRATE	6.06
NITROGEN	33.10	ATP	2.08	SILICATE	10.22
				AMMONIA	.75

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 6 03 78   DEPTH 5M

I	P	I	P	I	P	I	P
513.5	2.13	458.1	1.68	321.0	2.07	184.3	2.10
128.9	1.38	66.9	1.87	59.4	.99	35.0	1.27
34.5	1.23	18.5	.72	16.0	.68	11.2	.33
9.8	.30	6.6	.20	5.2	.19	3.4	.10
2.4	.05	2.4	.04	1.5	.04	.0	.02

PARAMETER VALUES

PS : 1.92	ALPHA : .045	BETA : .0000
(1.64, 2.20)	(.038, .052)	(-.0007, .0007)

SAMPLE TEMPERATURE .5 C   INCUBATION TEMPERATURE 1.2 C

CHLOROPHYLL : 6.15	RNA : 23.08	PHOSPHATE : .49
CARBON :163.00	DNA : 8.70	NITRATE : 5.72
NITROGEN : 32.60	ATP : 2.20	SILICATE : 9.78
		AMMONIA : .34

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 06 03 78 DEPTH 17M

I	P	I	P	I	P	I	P
872.2	1.21	966.6	1.82	677.6	1.99	593.1	2.37
497.8	2.05	496.5	1.73	459.8	2.10	454.8	2.27
430.9	2.23	388.0	2.34	304.9	2.06	217.2	2.09
204.9	2.09	195.2	2.11	190.4	1.97	161.0	2.25
105.9	2.10	104.4	2.36	97.3	2.41	79.5	2.32
77.1	1.37	70.1	2.33	60.7	2.33	51.9	1.79
51.4	1.77	45.2	.94	28.1	.93	20.6	.61
14.4	.47	8.4	.31	7.3	.28	6.3	.22
5.8	.15	3.4	.06	2.1	.06	2.1	.02
1.4	.02	.0	.01				

PARAMETER VALUES

PS : 2.55 (2.36, 2.75)

ALPHA : .052 (.046, .059)

BETA : .0012 (.0007, .0017)

SAMPLE TEMPERATURE .6 C

INCUBATION TEMPERATURE 1.2 C

CHLOROPHYLL : 6.12
CARBON :187.80
NITROGEN : 35.80

RNA : 19.06
DNA : 7.19
ATP : 2.35

PHOSPHATE : .50
NITRATE : 5.93
SILICATE : 10.56
AMMONIA : .32

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 08 03 78 DEPTH 5M

I	P	I	P	I	P	I	P
804.4	1.56	797.7	1.23	686.8	1.96	629.3	1.86
515.6	1.87	509.4	1.94	487.2	1.52	465.3	1.88
463.7	1.46	419.2	1.79	412.0	1.84	321.0	2.01
311.8	1.96	244.7	1.79	228.3	1.95	225.8	2.05
190.0	1.66	180.4	1.90	176.2	1.76	133.6	1.82
131.5	1.78	103.9	1.57	97.3	1.47	88.3	1.63
76.7	1.54	62.8	1.31	52.3	1.21	30.9	.82
29.8	.75	18.8	.46	15.3	.34	11.6	.25
7.3	.16	6.9	.23	5.2	.06	3.1	.11
2.9	.03	2.1	.05	1.5	.02	1.0	.01

PARAMETER VALUES

PS : 2.17	ALPHA : .032	BETA : .0009
(2.05, 2.30)	(.030, .034)	(.0006, .0012)

SAMPLE TEMPERATURE .6 C INCUBATION TEMPERATURE 1.5 C

CHLOROPHYLL : 8.93	RNA : 10.91	PHOSPHATE : .42
CARBON :141.30	DNA : 4.14	NITRATE : 5.07
NITROGEN : 27.60	ATP : 1.60	SILICATE : 8.66
		AMMONIA : .56

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 8 03 78 DEPTH 15M

I	P	I	P	I	P	I	P
475.5	1.48	447.8	1.89	201.8	1.76	172.6	1.72
91.1	1.83	65.9	1.79	50.2	1.30	35.5	1.18
24.9	.68	14.1	.51	13.8	.38	8.4	.20
7.3	.31	7.3	.12	4.8	.06	3.8	.13
2.9	.02	2.1	.07	1.5	.03	1.0	.01

PARAMETER VALUES

PS :	2.13	ALPHA :	.043	BETA :	.0012
(1.89,	2.36)	(.039,	.047)	(.0004,	.0020)

SAMPLE TEMPERATURE .7 C INCUBATION TEMPERATURE 1.5 C

CHLOROPHYLL :	7.76	RNA :	23.21	PHOSPHATE :	.49
CARBON :	157.20	DNA :	8.21	NITRATE :	5.72
NITROGEN :	31.70	ATP :	3.07	SILICATE :	9.98
				AMMONIA :	.57

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 10 03 78 DEPTH 5M

I	P	I	P	I	P	I	P
859.0	2.02	822.5	2.33	626.3	2.53	457.5	2.54
449.4	2.72	412.7	2.13	325.3	2.79	260.3	2.13
211.1	2.79	209.3	2.39	171.0	1.96	169.7	2.64
116.9	2.63	105.9	1.82	91.1	2.68	81.4	2.58
76.7	2.15	70.4	1.62	66.2	1.83	55.4	1.47
43.9	1.94	33.5	.87	33.0	.77	16.9	.52
14.4	.52	10.6	.30	6.3	.28	6.0	.11
3.8	.14	3.8	.06	2.7	.02	2.1	.07
1.5	.02	1.0	.01				

PARAMETER VALUES

PS : 2.77	ALPHA : .047	BETA : .0007
(2.54, 3.01)	(.042, .052)	(.0002, .0013)

SAMPLE TEMPERATURE .8 C INCUBATION TEMPERATURE 1.8 C

CHLOROPHYLL	: 8.93	RNA	: 34.13	PHOSPHATE	: .35
CARBON	:185.40	DNA	: 11.04	NITRATE	: 3.68
NITROGEN	: 35.00	ATP	: 1.75	SILICATE	: 7.10
				AMMONIA	: .33

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 10 03 78   DEPTH 12M

I	P	I	P	I	P	I	P
859.0	1.56	822.5	2.45	626.3	2.38	598.8	2.60
477.2	2.70	467.7	2.97	457.5	2.05	427.0	2.46
412.7	2.29	339.4	2.89	325.3	2.33	211.1	2.50
209.3	2.55	206.8	2.10	171.0	2.66	169.7	2.48
162.7	2.38	116.9	2.61	114.8	2.31	97.7	2.10
91.1	2.05	81.4	2.17	76.7	2.24	66.6	2.17
66.2	2.08	47.8	1.53	43.9	1.80	26.5	.87
25.4	1.22	14.1	.47	12.5	.53	8.8	.25
6.6	.33	6.6	.14	3.8	.08	3.4	.11
2.4	.04	1.8	.05	1.4	.02	.0	.01

PARAMETER VALUES

PS : 2.76   ALPHA : .053   BETA : .0008

(2.61, 2.92)   (.048, .057)   (.0004, .0012)

SAMPLE TEMPERATURE .8 C   INCUBATION TEMPERATURE 1.8 C

CHLOROPHYLL :	8.18	RNA :	28.55	PHOSPHATE :	.37
CARBON :	144.80	DNA :	12.56	NITRATE :	4.38
NITROGEN :	28.80	ATP :	1.89	SILICATE :	7.65
				AMMONIA :	.49

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 13 03 78 DEPTH 5M

I	P	I	P	I	P	I	P
844.5	2.17	481.2	2.31	456.2	2.28	420.9	2.56
286.0	2.43	242.9	2.45	171.0	2.38	166.3	2.07
146.1	2.62	87.9	2.51	87.3	2.01	71.3	2.46
62.8	2.10	61.1	1.94	47.0	1.31	45.6	1.83
35.9	1.11	27.6	.65	13.8	.39	13.2	.69
7.7	.24	6.3	.10	6.0	.35	3.8	.06
3.4	.13	2.7	.03	1.8	.06	1.5	.02
1.0	.01						

PARAMETER VALUES

PS : 2.71	ALPHA : .052	BETA : .0008
(2.51, 2.92)	(.047, .057)	(.0003, .0013)

SAMPLE TEMPERATURE 1.1 C INCUBATION TEMPERATURE 2.0 C

CHLOROPHYLL : 12.86	RNA : 56.10	PHOSPHATE : .37
CARBON : 241.60	DNA : 15.73	NITRATE : 3.28
NITROGEN : 49.60	ATP : 2.56	SILICATE : 7.40
		AMMONIA : .26

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 13 03 78   DEPTH 12M

I	P	I	P	I	P	I	P
497.2	1.85	441.2	2.02	279.6	2.21	159.4	2.05
97.7	1.82	66.6	2.12	43.6	1.23	29.2	1.30
27.6	.93	14.1	.59	12.8	.57	8.8	.23
6.9	.27	4.8	.12	3.1	.17	2.4	.06
2.1	.07	1.4	.02	1.0	.02	.0	.01

PARAMETER VALUES

PS : 2.42   ALPHA : .050   BETA : .0011

(2.17, 2.66)   (.045, .054)   (.0003, .0019)

SAMPLE TEMPERATURE 1.1 C   INCUBATION TEMPERATURE 2.0 C

CHLOROPHYLL :	12.44	RNA :	34.13	PHOSPHATE :	.52
CARBON :	247.80	DNA :	11.65	NITRATE :	3.38
NITROGEN :	51.90	ATP :	2.28	SILICATE :	7.66
				AMMONIA :	.48

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 15 03 78 DEPTH 5M

I	P	I	P	I	P	I	P
972.4	2.13	844.5	2.75	611.3	2.87	544.7	3.04
512.0	2.52	474.5	3.16	436.9	3.39	429.0	3.27
420.9	2.87	292.8	3.31	286.0	3.17	228.3	3.15
200.5	2.65	187.0	3.12	171.0	2.93	166.6	3.20
146.1	3.29	107.4	3.23	105.4	2.63	87.9	3.20
84.3	2.83	77.1	3.15	71.3	2.46	70.7	2.66
62.8	2.59	51.6	1.72	45.6	2.06	34.0	1.40
33.5	1.10	15.0	.71	14.1	.67	12.2	.44
7.3	.17	6.0	.29	4.8	.07	3.1	.21
2.7	.02	2.1	.06	1.5	.03	1.0	.01

PARAMETER VALUES

PS : 3.69 ALPHA : .061 BETA : .0017

(3.46, 3.91) (.056, .066) (.0011, .0022)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL	:	15.90	RNA	:	60.28	PHOSPHATE	:	.24
CARBON	:	240.80	DNA	:	16.94	NITRATE	:	1.71
NITROGEN	:	55.60	ATP	:	2.61	SILICATE	:	5.72
						AMMONIA	:	.17

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 15 03 78 DEPTH 12M

I	P	I	P	I	P	I	P
872.4	1.98	844.5	1.88	611.3	2.62	544.7	2.62
474.5	2.90	472.3	2.54	442.4	2.96	429.0	2.79
420.9	2.31	292.8	2.69	286.0	2.40	228.3	2.61
197.0	2.33	187.0	2.86	171.0	2.51	166.6	2.38
146.1	3.04	105.4	2.50	87.9	2.99	84.3	2.68
71.3	2.95	71.3	2.13	70.7	2.38	62.8	2.43
59.0	2.46	45.6	2.09	40.3	1.68	31.9	1.39
20.6	.83	14.1	.70	13.8	.45	8.8	.24
6.9	.40	6.6	.12	3.4	.15	3.4	.05
2.4	.03	2.1	.06	1.5	.03	1.0	.01

PARAMETER VALUES

PS : 3.06	ALPHA : .069	BETA : .0012
(2.89, 3.23)	(.062, .075)	(.0008, .0017)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL : 14.36	RNA : 50.52	PHOSPHATE : .33
CARBON :242.30	DNA : 16.64	NITRATE : 2.98
NITROGEN : 53.80	ATP : 4.64	SILICATE : 6.34
		AMMONIA : .06

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 17 03 78   DEPTH 5M

T	P	T	P	T	P	T	P
940.4	2.24	886.9	2.66	626.3	2.76	568.0	3.04
497.8	2.83	474.4	2.71	434.1	3.13	426.9	2.87
402.7	2.92	307.2	2.85	267.1	2.95	264.3	2.80
223.1	2.79	201.0	2.80	180.8	2.65	178.4	2.86
144.8	2.86	110.5	2.72	106.4	2.96	85.8	2.70
91.4	2.90	69.8	2.54	69.8	2.50	65.2	2.66
57.6	2.64	48.5	2.02	48.1	1.69	24.9	1.06
24.4	1.49	16.9	.75	12.2	.67	10.9	.32
6.9	.30	5.8	.18	4.3	.16	3.1	.07
2.1	.07	2.1	.02	1.6	.03	1.5	.01

PARAMETER VALUES

PS : 3.14   ALPHA : .070   BETA : .0007

(3.03, 3.25)   (.065, .074)   (.0005, .0010)

SAMPLE TEMPERATURE 1.2 C   INCUBATION TEMPERATURE 3.3 C

CHLOROPHYLL :	22.21	RNA :	82.61	PHOSPHATE :	.13
CARBON :	330.40	DNA :	18.15	NITRATE :	.06
NITROGEN :	67.70	ATP :	2.88	SILICATE :	2.64
				AMMONIA :	.94

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 17 03 78   DEPTH 10M

I	P	I	P	I	P	I	P
940.4	2.64	886.9	1.77	626.3	2.20	568.0	2.69
505.8	2.49	474.4	2.16	463.3	2.41	426.9	2.80
402.7	2.11	307.2	3.10	267.1	2.26	224.5	2.49
223.1	2.64	201.0	2.89	193.3	2.05	180.8	2.00
144.8	2.62	110.5	2.33	106.4	2.74	85.8	2.38
81.4	2.54	77.1	2.36	72.9	1.88	69.8	1.89
66.2	2.02	48.5	1.74	44.6	1.48	37.2	1.24
22.6	.78	18.2	.45	14.1	.60	13.5	.22
9.2	.35	9.2	.15	5.8	.15	4.8	.08
3.4	.04	2.9	.08	1.6	.05	1.5	.03

PARAMETER VALUES

PS : 2.79 (2.60, 2.98)   ALPHA : .051 (.046, .056)   BETA : .0008 (.0003, .0012)

SAMPLE TEMPERATURE 1.2 C   INCUBATION TEMPERATURE 3.3 C

CHLOROPHYLL	: 23.88	RNA	:	72.14	PHOSPHATE	:	.11
CARBON	:375.80	DNA	:	17.85	NITRATE	:	.38
NITROGEN	: 78.30	ATP	:	3.21	SILICATE	:	2.49
					AMMONIA	:	1.33

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 20 03 78 DEPTH 5M

T	P	I	P	T	P	I	P
930.0	2.15	896.4	1.70	560.1	2.31	502.9	2.31
498.2	1.93	458.7	2.29	440.1	2.22	420.0	2.32
386.5	2.40	275.2	2.27	267.9	2.20	259.1	2.12
204.3	2.27	180.8	2.30	171.0	2.18	107.4	2.33
91.5	1.87	86.4	2.45	83.8	2.10	78.5	2.32
72.7	2.00	64.0	1.86	62.4	1.90	59.0	1.89
54.5	1.25	46.3	1.35	27.6	1.05	24.9	.85
15.3	.57	11.9	.43	10.9	.24	6.0	.24
6.0	.13	3.1	.05	2.7	.13	2.4	.05
1.8	.04	1.4	.03	.0	.01		

PARAMETER VALUES

PS : 2.54 ALPHA : .051 BETA : .0007

(2.42, 2.66) (.047, .054) (.0005, .0010)

SAMPLE TEMPERATURE 1.1 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL	: 25.55	RNA	:	75.63	PHOSPHATE	:	.18
CARBON	:372.80	DNA	:	16.34	NITRATE	:	.39
NITROGEN	: 69.90	ATP	:	1.69	SILICATE	:	.77
					AMMONIA	:	.41

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 20 03 78   DEPTH 10M

I	P	I	P	I	P	I	P
930.0	2.30	886.4	1.99	560.1	2.39	498.2	2.40
477.9	2.30	458.7	1.98	456.8	2.10	420.0	2.66
386.5	2.30	275.2	2.40	267.9	2.41	204.3	2.12
193.5	2.11	188.4	2.19	180.8	2.53	170.8	2.26
107.4	2.44	86.4	1.96	86.4	2.14	83.8	2.02
78.5	2.55	75.4	1.72	72.7	2.53	62.4	1.83
59.0	2.13	46.3	1.75	40.3	.93	39.2	1.31
22.6	.78	12.5	.41	12.2	.48	9.5	.21
5.5	.24	5.5	.11	3.4	.09	3.1	.04
2.1	.03	2.1	.02	1.5	.01	1.0	.00

PARAMETER VALUES

PS : 2.50   ALPHA : .054   BETA : .0004

(2.36, 2.64)   (.049, .059)   (.0001, .0008)

SAMPLE TEMPERATURE 1.1 C   INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL : 25.21   RNA : 67.61   PHOSPHATE : .18

CARBON :421.90   DNA : 15.73   NITRATE : .48

NITROGEN : 81.60   ATP : 2.17   SILICATE : 1.44

AMMONIA : .48

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 23 03 78   DEPTH 5M

T	P	I	P	I	P	I	P
964.3	2.35	867.7	1.63	649.0	2.78	513.3	2.85
476.9	2.93	464.6	2.90	449.7	2.29	438.9	2.37
410.5	2.98	324.6	3.02	315.2	2.90	211.1	2.84
191.0	2.77	188.4	2.56	158.7	2.90	146.1	2.87
133.0	2.41	112.7	2.80	105.4	2.96	85.5	2.61
82.5	2.38	67.3	2.68	55.8	2.33	52.7	1.76
49.7	2.21	46.3	1.51	29.8	1.81	23.9	.96
23.5	.82	13.2	.56	11.9	.52	6.6	.31
5.5	.12	5.2	.13	3.8	.05	3.4	.05
2.1	.01	1.8	.01	1.5	.01		

PARAMETER VALUES

PS :	3.26	ALPHA :	.060	BETA :	.0014
(3.07,	3.45)	(.055,	.065)	(.0009,	.0019)

SAMPLE TEMPERATURE 1.3 C   INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL :	20.04	RNA :	63.43	PHOSPHATE :	.21
CARBON :	392.80	DNA :	14.37	NITRATE :	.10
NITROGEN :	61.10	ATP :	2.46	SILICATE :	.50
				AMMONIA :	.46

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 23 03 78 DEPTH 10M

I	P	I	P	I	P	I	P
964.3	2.12	867.7	2.79	649.0	2.26	513.3	2.80
476.9	2.73	438.9	2.83	414.7	2.51	410.5	2.46
324.6	2.90	315.2	2.72	211.1	2.83	191.0	2.74
158.7	2.59	146.1	2.79	128.3	1.76	112.7	2.61
105.4	2.72	101.5	1.61	85.5	2.26	67.3	2.47
56.3	1.13	55.8	2.21	49.7	2.04	43.9	1.42
30.3	.64	29.8	1.70	18.8	1.08	13.8	.44
9.5	.53	9.5	.20	5.5	.26	5.5	.12
3.8	.14	3.1	.04	2.9	.05	2.4	.03
1.6	.03	1.6	.00				

PARAMETER VALUES

PS : 2.90 ALPHA : .050 BETA : .0006

(2.67, 3.13) (.045, .056) (.0001, .0011)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL	: 23.04	RNA	:	67.26	PHOSPHATE	:	.18
CARBON	:425.00	DNA	:	14.67	NITRATE	:	.02
NITROGEN	: 69.70	ATP	:	4.01	SILICATE	:	.22
					AMMONIA	:	.32

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 28 03 78 DEPTH 5M

T	P	T	P	T	P	T	P
915.5	2.60	873.8	1.85	624.0	2.72	511.8	3.27
508.7	2.07	458.6	2.82	417.4	2.78	406.4	3.09
383.2	2.46	275.6	2.69	271.1	2.57	244.0	2.90
199.5	2.77	176.4	2.97	167.2	2.71	130.9	2.36
114.8	2.95	107.9	2.58	103.9	2.26	70.1	2.57
69.5	2.74	51.0	1.76	50.6	2.23	48.5	2.61
48.1	2.26	41.9	2.84	32.5	2.05	28.7	1.16
24.4	1.42	13.8	.78	12.5	.70	9.5	.36
5.8	.35	5.8	.15	2.9	.20	2.9	.09
1.8	.08	1.6	.04	1.4	.03	.0	.01

PARAMETER VALUES

PS : 2.94 ALPHA : .083 BETA : .0007

(2.78, 3.11) (.075, .092) (.0003, .0011)

SAMPLE TEMPERATURE 1.6 C INCUBATION TEMPERATURE 3.1 C

CHLOROPHYLL	: 8.56	RNA	:	35.53	PHOSPHATE	:	.06
CARBON	:309.90	DNA	:	9.53	NITRATE	:	.02
NITROGEN	: 41.10	ATP	:	1.90	SILICATE	:	.78
					AMMONIA	:	.26

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 28 03 78 DEPTH 10M

I	P	I	P	I	P	I	P
915.5	3.05	873.8	1.88	624.0	2.73	508.7	3.16
470.3	2.74	458.6	2.45	453.8	2.45	406.4	2.73
383.2	3.26	275.6	2.96	244.0	2.69	225.2	2.37
199.5	2.95	176.4	2.92	167.2	2.86	156.5	2.41
114.8	2.91	107.9	2.83	94.3	2.45	70.1	2.47
69.5	2.73	50.6	2.47	48.5	2.60	47.4	2.25
42.6	1.75	41.9	2.30	32.5	2.08	23.9	1.33
23.0	.98	11.6	.59	11.2	.73	8.0	.31
5.8	.17	5.5	.39	3.4	.06	2.7	.16
2.1	.02	1.8	.08	1.6	.04	1.4	.01

PARAMETER VALUES

PS : 2.95 ALPHA : .083 BETA : .0005

(2.81, 3.09) (.075, .091) (.0001, .0008)

SAMPLE TEMPERATURE 1.5 C INCUBATION TEMPERATURE 3.1 C

CHLOROPHYLL : 9.94 RNA : 39.36 PHOSPHATE : .06

CARBON :287.30 DNA : 10.59 NITRATE : .00

NITROGEN : 44.90 ATP : 2.75 SILICATE : .78

AMMONIA : .08

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 31 03 78   DEPTH 5M

I	P	I	P	I	P	I	P
915.5	1.51	873.8	2.60	624.0	2.50	511.8	2.91
458.6	2.84	417.4	2.55	406.4	2.41	383.2	2.69
275.6	2.71	271.1	2.97	244.0	1.84	199.5	2.10
176.4	2.63	167.2	3.02	130.9	2.70	114.8	2.91
107.9	2.70	103.9	1.82	70.1	1.83	69.5	2.86
51.0	2.58	50.6	2.66	48.5	2.51	48.1	1.28
41.9	2.17	32.5	1.25	28.7	1.79	24.4	1.12
13.8	.60	12.5	.68	9.5	.27	5.8	.31
5.8	.14	2.9	.12	2.9	.05	1.8	.03
1.6	.05	1.4	.02	.0	.03		

PARAMETER VALUES

PS : 2.84	ALPHA : .075	BETA : .0008
(2.63, 3.06)	(.065, .085)	(.0002, .0013)

SAMPLE TEMPERATURE 1.7 C   INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL	: 7.10	RNA	: 39.01	PHOSPHATE	: .09
CARBON	:269.20	DNA	: 16.64	NITRATE	: .00
NITROGEN	: 45.40	ATP	: 1.91	SILICATE	: .38
				AMMONIA	: .20

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 31 03 78 DEPTH 10M

I	P	I	P	I	P	I	P
915.5	1.48	973.8	2.84	624.0	2.47	508.7	3.12
470.3	3.12	458.6	2.74	453.8	2.43	406.4	2.56
383.2	2.92	275.6	2.89	244.0	3.11	226.2	2.65
199.5	2.91	176.4	3.13	167.2	2.49	156.5	2.85
114.8	2.85	107.9	2.85	94.3	2.64	70.1	3.01
69.5	2.64	50.6	2.58	48.5	2.44	47.4	2.54
42.6	2.47	41.9	1.68	32.5	1.92	23.9	2.35
23.0	1.02	11.6	1.41	11.2	.57	8.0	.31
5.8	.72	5.5	.18	3.4	.09	2.7	.39
2.1	.03	1.8	.14	1.6	.05	1.4	.03

PARAMETER VALUES

PS : 3.13	ALPHA : .096	BETA : .0011
(2.96, 3.30)	(.086, .106)	(.0006, .0015)

SAMPLE TEMPERATURE 1.4 C INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL :	8.33	RNA :	47.73	PHOSPHATE :	.10
CARBON :	277.20	DNA :	16.94	NITRATE :	.12
NITROGEN :	50.20	ATP :	2.33	SILICATE :	.16
				AMMONIA :	.22

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 03 04 78 DEPTH 5M

I	P	I	P	I	P	I	P
934.5	1.52	941.0	2.35	651.8	2.43	521.5	2.44
493.9	2.50	483.8	2.41	425.8	2.55	411.5	2.72
393.2	2.51	271.1	2.71	249.4	2.24	214.1	2.56
193.5	2.70	189.4	2.60	152.0	2.43	146.1	2.60
136.1	2.06	102.4	2.47	92.3	2.46	85.5	2.37
77.6	2.30	76.7	2.33	61.1	2.11	51.4	2.06
48.9	1.83	48.1	1.90	41.9	1.46	21.7	1.22
18.8	1.31	12.5	.54	9.9	.92	8.8	.42
5.5	.27	3.8	.25	2.9	.14	2.1	.07
1.6	.14	1.6	.02	1.0	.09	.0	.01

PARAMETER VALUES

PS : 2.76 ALPHA : .067 BETA : .0008

(2.65, 2.87) (.062, .072) (.0006, .0011)

SAMPLE TEMPERATURE 1.4 C INCUBATION TEMPERATURE 2.9 C

CHLOROPHYLL	8.39	RNA	:	49.48	PHOSPHATE	:	.14
CARBON	303.90	DNA	:	17.85	NITRATE	:	.02
NITROGEN	55.70	ATP	:	2.57	SILICATE	:	.16
					AMMONIA	:	.17

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 03 04 78 DEPTH 10M

I	P	I	P	I	P	I	P
934.5	1.30	841.0	2.50	551.8	2.32	521.5	2.62
492.4	2.63	483.8	2.74	480.1	2.55	457.9	2.35
425.8	2.73	411.5	2.74	271.1	2.75	249.4	2.44
198.8	2.65	193.5	2.79	189.4	2.46	184.3	2.67
152.0	2.73	146.1	2.55	102.4	2.73	92.3	2.48
85.5	2.37	77.1	2.37	67.3	2.03	61.1	2.33
48.1	2.15	46.6	1.74	41.9	1.60	37.2	1.24
19.8	1.06	13.2	.58	11.2	.70	8.0	.42
5.5	.33	4.8	.27	3.1	.15	2.9	.19
2.1	.12	1.8	.08	1.5	.05	1.4	.03

PARAMETER VALUES

PS :	3.07	ALPHA :	.060	BETA :	.0014
(2.93, 3.21)		(.056, .064)		(.0010, .0017)	

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 2.9 C

CHLOROPHYLL :	8.76	RNA :	44.94	PHOSPHATE :	.10
CARBON :	313.20	DNA :	17.85	NITRATE :	.38
NITROGEN :	59.70	ATP :	2.39	SILICATE :	.16
				AMMONIA :	.46

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 05 04 78 DEPTH 5M

I	P	I	P	I	P	I	P
493.9	2.75	393.2	3.11	214.1	2.93	136.1	2.69
76.7	2.68	51.4	2.27	48.9	1.94	21.7	1.27
19.8	1.06	12.5	.82	9.9	.50	8.8	.32
5.5	.14	3.8	.24	2.9	.06	2.1	.13
1.6	.02	1.6	.05	1.0	.03	.0	.01

PARAMETER VALUES

PS : 3.10 (2.89, 3.31)

ALPHA : .069 (.064, .073)

BETA : .0005 (-.0001, .0011)

SAMPLE TEMPERATURE 1.6 C

INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL : 8.21

CARBON :309.30

NITROGEN : 54.80

RNA : 60.64

DNA : 18.00

ATP : 2.60

PHOSPHATE : .06

NITRATE : .03

SILICATE : .00

AMMONIA : .16

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 05 04 78 DEPTH 10M

I	P	I	P	I	P	I	P
480.1	2.29	457.9	2.54	198.8	2.54	184.3	2.27
77.1	2.05	67.3	1.93	46.6	1.76	37.2	1.15
19.9	1.07	13.2	.62	11.2	.66	9.0	.40
5.5	.30	4.8	.27	3.1	.14	2.9	.12
2.1	.11	1.8	.09	1.5	.02	1.4	.01

PARAMETER VALUES

PS : 2.45	ALPHA : .057	BETA : .0001
(2.31, 2.60)	(.054, .061)	(-.0003, .0005)

SAMPLE TEMPERATURE 1.6 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL : 9.75	RNA : 48.08	PHOSPHATE : .14
CARBON : 280.70	DNA : 18.81	NITRATE : .08
NITROGEN : 51.05	ATP : 3.12	SILICATE : .06
		AMMONIA : .53

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 07 04 78 DEPTH 5M

I	P	I	P	I	P	I	P
934.5	1.91	841.0	1.79	651.8	3.04	521.5	2.59
517.4	2.64	483.8	2.88	425.8	2.46	411.5	2.90
352.2	2.73	271.1	3.02	249.4	2.63	196.1	2.66
193.5	2.66	189.4	2.99	152.0	3.03	146.1	2.69
102.4	2.97	93.0	2.56	92.3	2.67	87.0	2.38
85.5	2.88	77.6	2.63	61.1	2.56	49.7	1.84
48.1	2.62	44.6	2.24	41.9	1.51	21.3	1.26
16.9	.88	14.4	.90	9.2	.42	8.0	.49
5.2	.30	4.3	.23	2.9	.15	2.1	.12
1.8	.10	1.6	.03	1.0	.00	.0	.00

PARAMETER VALUES

PS : 3.22 (3.07, 3.37)

ALPHA : .072 (.067, .078)

BETA : .0014 (.0010, .0018)

SAMPLE TEMPERATURE 1.6 C

INCUBATION TEMPERATURE 2.6 C

CHLOROPHYLL	8.42	RNA	49.13	PHOSPHATE	.13
CARBON	313.80	DNA	9.73	NITRATE	.14
NITROGEN	55.90	ATP	2.99	SILICATE	.44
				AMMONIA	.24

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 07 04 79 DEPTH 10M

T	P	T	P	T	P	I	P
934.5	1.62	841.0	1.79	651.8	2.56	521.5	2.46
483.8	2.62	463.6	2.54	448.7	2.50	425.8	2.69
411.5	2.54	271.1	2.55	249.4	2.57	193.5	2.68
189.4	2.90	178.2	2.49	175.5	2.42	152.0	2.81
146.1	2.45	102.4	2.37	92.3	2.49	85.5	2.49
77.6	2.36	76.7	2.34	62.0	2.19	61.1	2.32
48.1	2.02	42.3	1.60	41.9	1.82	27.0	1.38
19.5	.99	12.2	.61	11.9	.75	8.0	.34
4.0	.33	5.5	.21	3.4	.13	2.7	.12
2.1	.07	1.5	.04	1.0	.01	.0	.00

PARAMETER VALUES

PS : 3.01 ALPHA : .064 BETA : .0014

(2.91, 3.11) (.061, .068) (.0011, .0017)

SAMPLE TEMPERATURE 1.2 C INCUBATION TEMPERATURE 2.6 C

CHLOROPHYLL	: 9.05	RNA	: 52.96	PHOSPHATE	: .06
CARBON	:259.10	DNA	: 9.98	NITRATE	: .30
NITROGEN	: 48.60	ATP	: 2.35	SILICATE	: .44
				AMMONIA	: .10

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 10 04 78   DEPTH 5M

I	P	I	P	I	P	I	P
954.7	1.48	883.8	1.43	617.4	2.13	604.1	1.75
504.4	1.95	476.6	1.62	440.0	1.98	401.3	2.37
348.6	2.16	330.5	2.13	282.0	1.81	200.5	1.86
196.8	1.79	169.7	2.03	142.5	2.05	132.0	1.71
127.7	2.22	96.4	1.72	92.6	1.93	92.3	1.99
75.4	1.98	73.4	1.90	71.3	1.76	54.5	1.81
47.8	1.35	43.9	1.32	41.6	1.37	21.3	.80
18.2	.61	10.6	.48	8.4	.29	5.8	.19
4.8	.12	3.1	.09	2.1	.07	1.6	.04
1.6	.03	1.0	.01	1.0	.01	.0	.01

PARAMETER VALUES

PS : 2.24   ALPHA : .050   BETA : .0008

(2.14, 2.35)   (.046, .055)   (.0006, .0011)

SAMPLE TEMPERATURE 1.3 C   INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL	: 4.80	RNA	:	33.08	PHOSPHATE	:	.08
CARBON	:288.90	DNA	:	10.29	NITRATE	:	.00
NITROGEN	: 48.20	ATP	:	1.49	SILICATE	:	.61
					AMMONIA	:	.43

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 10 04 78 DEPTH 12M

I	P	I	P	I	P	I	P
954.7	1.02	883.8	.89	617.4	1.45	604.1	1.58
476.6	1.82	466.2	1.60	444.4	1.72	440.0	1.62
401.3	1.80	330.5	1.69	282.0	1.76	201.8	1.78
200.5	1.68	169.7	1.84	169.2	1.65	142.5	1.68
127.7	1.85	96.4	1.83	92.3	1.69	78.1	1.66
75.4	1.74	73.4	1.82	71.3	1.59	66.6	1.48
54.5	1.67	41.9	1.15	41.6	1.40	33.0	.89
18.2	.66	12.2	.46	9.5	.37	6.6	.20
5.5	.24	2.9	.11	2.1	.08	2.1	.05
1.5	.02	1.4	.04	.0	.02	.0	.01

PARAMETER VALUES

PS : 2.13 ALPHA : .047 BETA : .0014

(2.05, 2.22) (.044, .050) (.0012, .0017)

SAMPLE TEMPERATURE 1.1 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL :	7.45	RNA :	36.23	PHOSPHATE :	.17
CARBON :	260.10	DNA :	9.83	NITRATE :	.32
NITROGEN :	44.00	ATP :	2.43	SILICATE :	.06
				AMMONIA :	.57

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 14 04 78   DEPTH 5M

I	P	I	P	I	P	I	P
922.3	1.84	811.3	1.43	529.9	2.41	507.1	2.02
485.8	2.12	437.1	2.45	392.4	2.22	383.5	2.49
369.0	2.22	289.6	2.17	247.8	2.54	209.9	2.23
179.3	2.48	158.7	2.16	122.4	2.40	92.3	1.63
88.3	2.02	83.8	2.26	80.7	2.37	75.7	2.01
71.0	2.29	58.1	1.80	51.0	2.23	46.6	1.68
45.6	1.66	43.9	1.81	37.6	1.73	23.5	1.12
16.3	.81	13.8	.67	8.8	.36	8.8	.28
4.3	.14	3.8	.17	2.4	.04	2.1	.01
1.8	.09	1.6	.05	1.4	.02	.0	.01

PARAMETER VALUES

PS : 2.63   ALPHA : .062   BETA : .0011

(2.49, 2.76)   (.058, .067)   (.0008, .0015)

SAMPLE TEMPERATURE 1.8 C   INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL	: 5.85	RNA	: 35.53	PHOSPHATE	:	.03
CARBON	:286.70	DNA	: 11.35	NITRATE	:	.21
NITROGEN	: 52.30	ATP	: 1.71	SILICATE	:	.44
				AMMONIA	:	.09

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 14 04 78 DEPTH 12M

I	P	I	P	I	P	I	P
922.3	1.51	811.3	1.34	529.9	2.03	490.7	1.92
485.8	2.17	437.1	2.33	429.1	2.07	392.4	1.88
368.0	2.30	247.8	2.14	214.4	1.96	209.9	2.46
179.3	2.19	177.8	2.04	158.7	2.21	122.4	2.43
87.9	1.76	83.8	2.29	80.7	2.08	77.6	1.84
75.7	2.01	71.0	2.06	58.1	1.75	51.0	2.06
43.9	1.86	42.3	1.23	41.9	1.27	37.6	1.61
20.9	.73	16.3	.71	11.9	.44	7.3	.23
6.6	.42	3.1	.09	2.9	.12	1.6	.05
1.6	.06	1.0	.04	.0	.03	.0	.03

PARAMETER VALUES

PS : 2.58 ALPHA : .056 BETA : .0015

(2.44, 2.71) (.052, .060) (.0011, .0018)

SAMPLE TEMPERATURE 1.2 C INCUBATION TEMPERATURE 2.5 C

CHLOROPHYLL : 5.71 RNA : 35.52 PHOSPHATE : .16

CARBON :223.00 DNA : 11.35 NITRATE : .57

NITROGEN : 42.00 ATP : 2.24 SILICATE : .36

AMMONIA : 1.65

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 19 04 78 DEPTH 5M

I	P	I	P	I	P	I	P
913.4	2.20	795.9	2.18	579.6	2.58	494.4	2.32
457.0	2.60	372.7	2.59	363.1	2.95	300.7	2.74
249.4	2.77	199.5	2.62	182.5	2.74	139.1	2.67
112.1	2.71	89.6	2.54	85.2	2.04	84.1	2.60
77.8	2.41	69.5	2.44	48.9	2.14	43.9	2.45
36.4	1.93	35.0	2.15	24.4	1.98	16.0	.99
7.3	.41	3.8	.15	2.4	.12	1.6	.04
1.4	.02	.0	.01				

PARAMETER VALUES

PS : 2.80 ALPHA : .096 BETA : .0006

(2.70, 2.91) (.087, .104) (.0004, .0009)

SAMPLE TEMPERATURE 1.5 C INCUBATION TEMPERATURE 2.3 C

CHLOROPHYLL	: 4.52	RNA	:	33.78	PHOSPHATE	:	.07
CARBON	:245.10	DNA	:	14.07	NITRATE	:	.00
NITROGEN	: 39.50	ATP	:	2.22	SILICATE	:	.00
					AMMONIA	:	.06

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 19 04 78 DEPTH 12M

I	P	I	P	I	P	I	P
913.4	1.50	795.8	1.60	578.6	1.98	494.4	2.06
481.1	2.01	457.0	2.30	372.7	2.08	363.1	2.39
249.4	2.39	199.5	2.20	183.9	2.14	182.5	2.21
139.1	2.25	112.1	2.36	89.6	2.20	84.1	2.25
77.8	2.07	75.9	1.89	69.5	2.17	48.9	1.81
43.9	2.09	39.5	.96	35.0	1.86	24.4	1.49
15.0	.52	7.3	.26	4.3	.08	2.4	.05
1.5	.02	1.0	.01				

PARAMETER VALUES

PS : 2.58 ALPHA : .065 BETA : .0013

(2.43, 2.73) (.058, .071) (.0009, .0017)

SAMPLE TEMPERATURE 1.2 C INCUBATION TEMPERATURE 2.3 C

CHLOROPHYLL	: 5.50	RNA	:	35.53	PHOSPHATE	:	.09
CARBON	:202.90	DNA	:	11.50	NITRATE	:	.22
NITROGEN	: 38.90	ATP	:	2.30	SILICATE	:	.06
					AMMONIA	:	.92

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 04 26 78   DEPTH 5M

I	P	I	P	I	P	I	P
798.4	2.47	500.3	2.74	478.0	2.96	396.0	2.90
335.2	3.05	225.8	2.97	215.5	2.94	181.9	2.73
113.7	2.82	101.9	2.86	83.0	2.90	62.4	2.72
54.5	2.51	43.9	2.07	43.3	2.10	33.0	2.16
20.6	1.37	14.4	1.03	12.8	.82	8.0	.43
7.3	.29	3.8	.19	3.4	.14	1.8	.06
1.6	.11	1.4	.03	1.0	.03	1.0	.01
.0	.01						

PARAMETER VALUES

PS : 3.17	ALPHA : .086	BETA : .0008
(3.07, 3.28)	(.082, .090)	(.0006, .0011)

SAMPLE TEMPERATURE 2.2 C   INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL	:	7.52	RNA	:	49.48	PHOSPHATE	:	.04
CARBON	:	311.00	DNA	:	14.37	NITRATE	:	.07
NITROGEN	:	54.00	ATP	:	2.66	SILICATE	:	.18
						AMMONIA	:	1.02

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 26 04 78   DEPTH 10M

I	P	I	P	I	P	I	P
943.0	2.19	798.4	1.90	591.6	2.64	500.3	2.11
495.6	2.22	466.8	2.25	417.8	2.38	396.0	2.42
388.5	2.07	306.9	2.58	225.8	2.13	215.6	2.44
194.8	2.05	184.9	2.14	181.9	2.30	166.6	2.65
113.7	2.03	98.6	2.38	91.5	1.94	88.3	2.23
83.0	2.14	79.5	2.11	69.2	1.84	62.4	1.90
54.5	1.87	40.9	1.33	37.6	1.07	33.0	1.60
18.8	.71	15.7	.53	10.2	.39	8.0	.28
6.9	.21	4.3	.11	3.4	.09	2.1	.10
1.8	.04	1.0	.02	.0	.01		

PARAMETER VALUES

PS : 2.47   ALPHA : .053   BETA : .0004

(2.36, 2.58)   (.049, .057)   (.0002, .0007)

SAMPLE TEMPERATURE 1.6 C   INCUBATION TEMPERATURE 3.0 C

CHLOROPHYLL : 7.52   RNA : 50.52   PHOSPHATE : .10

CARBON :218.50   DNA : 14.52   NITRATE : .33

NITROGEN : 40.00   ATP : 1.87   SILICATE : .09

AMMONIA : .82

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 03 05 78   DEPTH 5M

I	P	I	P	I	P	I	P
943.0	2.57	591.6	3.15	500.7	2.93	466.8	3.04
388.5	3.16	306.9	3.07	301.1	3.12	217.2	2.78
215.6	3.11	166.6	2.97	103.4	2.81	98.6	2.97
88.3	2.70	81.2	2.68	69.2	2.47	45.2	2.11
40.6	1.85	16.9	.97	13.5	.94	10.2	.54
6.9	.46	6.0	.21	3.8	.13	3.1	.22
2.7	.09	1.6	.11	1.5	.06	1.0	.03
.0	.02						

PARAMETER VALUES

PS : 3.25   ALPHA : .070   BETA : .0006

(3.16, 3.33)   (.067, .074)   (.0004, .0008)

SAMPLE TEMPERATURE 2.6 C   INCUBATION TEMPERATURE 3.4 C

CHLOROPHYLL	: 5.35	RNA	:	41.11	PHOSPHATE	:	.04
CARBON	:333.00	DNA	:	12.40	NITRATE	:	.05
NITROGEN	: 55.00	ATP	:	2.00	SILICATE	:	.18
					AMMONIA	:	.54

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 03 05 78 DEPTH 15M

I	P	I	P	I	P	I	P
943.0	1.65	591.6	2.14	485.4	2.43	466.8	2.18
454.9	2.40	388.5	2.35	306.9	2.25	215.6	2.16
189.4	2.38	183.3	2.38	166.6	2.11	98.6	2.09
89.3	2.18	88.3	1.86	73.7	2.17	69.2	1.68
41.6	1.50	39.2	1.24	19.8	.82	14.4	.67
10.9	.47	7.3	.25	6.0	.37	3.8	.14
3.4	.18	2.4	.06	1.8	.07	1.5	.03
1.4	.04	.0	.01				

PARAMETER VALUES

PS : 2.58	ALPHA : .049	BETA : .0009
(2.47, 2.69)	(.046, .052)	(.0006, .0012)

SAMPLE TEMPERATURE 1.3 C INCUBATION TEMPERATURE 3.4 C

CHLOROPHYLL	: 6.40	RNA	:	43.90	PHOSPHATE	:	.06
CARBON	:234.00	DNA	:	12.25	NITRATE	:	.18
NITROGEN	: 42.00	ATP	:	1.91	SILICATE	:	.18
					AMMONIA	:	.78

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 10 05 78   DEPTH 5M

I	P	I	P	I	P	I	P
931.3	1.91	838.7	2.56	613.3	2.70	512.8	2.77
477.3	2.92	455.2	2.64	391.1	2.75	360.9	2.67
265.1	2.72	264.7	2.90	247.8	2.85	209.6	2.78
195.9	2.90	153.9	3.01	102.9	2.13	90.7	2.78
85.2	2.63	84.6	2.33	81.0	2.93	67.6	2.58
59.4	2.48	51.4	2.46	45.2	1.59	39.2	2.01
28.1	1.74	27.0	1.58	20.6	.96	12.5	.71
10.6	.50	6.0	.35	6.0	.20	2.9	.19
2.9	.11	2.1	.09	1.6	.03	1.5	.05
1.4	.03	1.0	.03	.0	.01		

PARAMETER VALUES

PS : 3.11	ALPHA : .074	BETA : .0010
(2.98, 3.24)	(.069, .079)	(.0007, .0013)

SAMPLE TEMPERATURE 4.0 C   INCUBATION TEMPERATURE 4.1 C

CHLOROPHYLL :	4.94	RNA :	48.08	PHOSPHATE :	.05
CARBON :	302.00	DNA :	16.94	NITRATE :	.05
NITROGEN :	52.50	ATP :	1.23	SILICATE :	.27
				AMMONIA :	.91

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 10 05 78 DEPTH 12M

I	P	I	P	I	P	I	P
931.3	2.10	838.7	2.67	613.3	2.59	478.0	2.57
477.3	2.48	458.9	2.78	455.2	2.52	391.1	2.42
360.9	2.73	247.8	2.72	209.6	2.80	202.3	2.48
195.9	2.56	183.9	2.42	153.9	2.50	144.8	2.76
93.9	2.35	90.7	2.55	85.2	2.77	81.0	2.34
77.4	2.21	67.6	2.50	59.4	2.15	51.4	2.29
46.3	1.38	39.2	1.94	34.0	1.29	27.0	1.47
23.5	.79	14.4	.58	11.9	.40	7.3	.27
5.8	.28	3.1	.11	3.1	.10	2.1	.06
1.6	.03	1.5	.02	1.0	.01	.0	.01

PARAMETER VALUES

PS : 2.83 (2.71, 2.95)

ALPHA : .064 (.059, .068)

BETA : .0006 (.0003, .0009)

SAMPLE TEMPERATURE 2.6 C

INCUBATION TEMPERATURE 4.1 C

CHLOROPHYLL : 6.06	RNA : 50.18	PHOSPHATE :	.06
CARBON :360.00	DNA : 15.88	NITRATE :	.05
NITROGEN : 59.00	ATP : 1.33	SILICATE :	.18
		AMMONIA :	.96

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 17 05 78   DEPTH 5M

I	P	I	P	I	P	I	P
893.9	2.10	782.5	3.04	632.3	3.15	512.4	3.49
498.9	2.75	470.8	3.52	392.4	3.44	379.9	3.64
241.0	3.29	238.4	3.40	230.7	3.41	215.3	2.74
176.9	3.43	173.8	3.15	116.9	3.16	113.2	3.47
89.0	3.09	83.8	2.95	76.9	2.39	76.2	3.25
71.6	2.81	70.1	2.91	47.4	2.57	43.3	1.95
41.9	2.50	34.5	2.15	34.5	1.70	20.2	1.02
13.5	.78	9.5	.56	6.3	.33	6.3	.22
3.1	.14	2.9	.14	2.1	.06	1.8	.08
1.6	.02	1.4	.04	1.0	.03	.0	.01

PARAMETER VALUES

PS :	3.73	ALPHA :	.077	BETA :	.0013
(3.54,	3.91)	(.072,	.083)	(.0009,	.0018)

SAMPLE TEMPERATURE 6.0 C   INCUBATION TEMPERATURE 5.1 C

CHLOROPHYLL :	7.31	RNA :	64.70	PHOSPHATE :	.08
CARBON :	527.00	DNA :	23.87	NITRATE :	.00
NITROGEN :	85.00	ATP :	2.79	SILICATE :	.00
				AMMONIA :	.70

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 17 05 78   DEPTH. 8M

I	P	I	P	I	P	I	P
893.8	2.29	782.5	3.12	632.3	2.72	498.8	3.54
479.9	2.97	470.8	3.17	451.7	3.13	392.4	3.09
379.9	3.43	238.4	2.87	215.3	3.56	182.1	3.07
176.9	3.38	175.7	2.85	173.8	3.52	116.9	3.26
113.2	3.12	83.8	3.00	76.2	2.90	72.1	2.62
71.6	2.88	70.7	2.53	70.1	2.77	47.4	2.44
42.3	1.39	41.9	2.26	36.4	1.29	34.5	1.89
19.8	.68	15.3	.69	9.9	.35	8.8	.20
6.3	.30	3.8	.11	2.1	.11	2.1	.02
1.6	.03	1.5	.01	1.0	.01		

PARAMETER VALUES

PS : 3.76   ALPHA : .066   BETA : .0015

(3.54, 3.97)   (.061, .070)   (.0010, .0020)

SAMPLE TEMPERATURE 4.5 C   INCUBATION TEMPERATURE 5.1 C

CHLOROPHYLL	: 7.80	RNA	:	77.52	PHOSPHATE	:	.06
CARBON	:519.00	DNA	:	19.65	NITRATE	:	.00
NITROGEN	: 85.50	ATP	:	2.67	SILICATE	:	.13
					AMMONIA	:	.44

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 24 05 78   DEPTH 5M

I	P	I	P	I	P	I	P
919.5	1.15	723.4	1.47	480.4	2.97	473.3	3.12
463.2	2.99	388.2	2.24	383.0	3.27	357.8	2.35
230.7	2.30	202.5	3.19	196.3	2.43	176.6	2.99
172.1	2.20	146.6	3.05	125.6	2.46	89.6	3.04
86.7	2.92	84.1	2.90	69.8	1.87	59.4	2.35
58.1	2.85	51.4	1.80	45.6	1.84	37.2	1.53
34.5	1.45	19.5	.87	15.0	.77	10.9	.43
6.6	.39	6.3	.13	3.1	.17	2.7	.05
2.1	.05	1.8	.01	1.5	.02	1.4	.00
.0	.00						

PARAMETER VALUES

PS : 3.56   ALPHA : .062   BETA : .0030

(3.18, 3.94)   (.055, .069)   (.0017, .0042)

SAMPLE TEMPERATURE 5.9 C   INCUBATION TEMPERATURE 5.0 C

CHLOROPHYLL :	5.64	RNA :	72.59	PHOSPHATE :	.08
CARBON :	371.00	DNA :	28.09	NITRATE :	.02
NITROGEN :	70.50	ATP :	3.20	SILICATE :	.18
				AMMONIA :	.04

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 24 05 78 DEPTH 10M

I	P	I	P	I	P	I	P
919.5	1.26	723.4	2.61	626.4	2.67	486.1	3.16
485.1	2.71	463.2	3.01	388.2	2.83	383.0	3.41
368.8	3.44	357.8	3.06	230.7	3.47	196.3	3.04
191.2	3.25	146.6	3.18	125.6	3.78	93.0	3.00
86.7	3.41	94.1	2.75	79.3	2.68	69.8	3.01
59.4	2.37	55.8	2.45	51.4	2.42	42.3	1.91
34.5	1.90	27.0	1.39	20.2	.87	14.1	.61
10.9	.37	8.0	.30	6.6	.17	4.3	.13
2.9	.10	2.1	.04	2.1	.03	1.5	.04
1.4	.02	1.4	.00				

PARAMETER VALUES

PS : 4.54 (4.21, 4.87)

ALPHA : .065 (.061, .069)

BETA : .0044 (.0034, .0054)

SAMPLE TEMPERATURE 4.5 C

INCUBATION TEMPERATURE 5.0 C

CHLOROPHYLL	4.80	RNA	64.70	PHOSPHATE	.02		
CARBON	305.50	DNA	20.80	NITRATE	.05		
NITROGEN	57.00	ATP	2.67	SILICATE	.18		
				AMMONIA	.20		

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 31 05 78 DEPTH 5M

I	P	I	P	I	P	I	P
932.7	1.96	758.0	4.97	619.1	3.82	508.7	4.82
481.5	4.81	469.4	4.56	465.6	4.89	352.8	4.40
241.7	3.85	209.0	4.58	208.7	4.72	192.7	5.09
172.3	4.49	158.0	4.06	142.5	3.63	93.9	3.61
84.1	4.99	83.0	4.25	76.2	3.34	70.1	3.42
66.6	4.14	62.8	2.77	51.4	3.44	39.5	3.54
38.0	2.65	33.0	2.36	31.4	2.33	18.8	1.11
11.9	1.09	9.5	.51	6.6	.45	5.5	.23
2.9	.10	2.4	.27	1.8	.04	1.8	.16
1.4	.01	1.0	.07	.0	.05		

PARAMETER VALUES

PS : 5.12	ALPHA : .097	BETA : .0019
(4.71, 5.52)	(.087, .108)	(.0009, .0030)

SAMPLE TEMPERATURE 8.5 C INCUBATION TEMPERATURE 5.3 C

CHLOROPHYLL : 2.79	RNA : 42.02	PHOSPHATE : .10
CARBON :364.00	DNA : 36.00	NITRATE : .00
NITROGEN : 61.00	ATP : 2.75	SILICATE : 1.32
		AMMONIA : .53

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 31 05 78 DEPTH 10M

I	P	I	P	I	P	I	P
932.7	2.33	758.0	2.92	619.1	3.33	483.0	4.13
481.5	3.77	465.6	2.90	426.5	3.70	388.9	4.01
352.8	4.31	241.7	4.28	209.0	3.83	202.3	3.88
192.7	4.21	176.4	3.26	158.0	4.27	142.5	3.76
93.9	4.33	90.0	3.31	84.1	3.52	76.2	3.03
70.1	3.80	69.8	2.62	62.8	2.48	51.4	3.11
43.3	1.93	39.5	2.25	34.0	1.27	33.0	1.85
20.6	.93	14.4	.47	11.6	.42	6.6	.22
6.3	.24	4.3	.12	3.4	.13	1.8	.11
1.6	.04	1.6	.01	.0	.03	.0	.02

PARAMETER VALUES

PS : 5.22 ALPHA : .069 BETA : .0041

(4.78, 5.67) (.064, .074) (.0028, .0053)

SAMPLE TEMPERATURE 8.5 C INCUBATION TEMPERATURE 5.3 C

CHLOROPHYLL	2.99	RNA	34.13	PHOSPHATE	.15
CARBON	291.50	DNA	25.72	NITRATE	.00
NITROGEN	50.00	ATP	2.29	SILICATE	.99
				AMMONIA	.63

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 14 06 78 DEPTH 5M

I	P	I	P	I	P	I	P
910.9	6.77	788.7	7.47	619.5	9.77	495.3	11.43
479.7	12.16	470.1	10.33	456.9	11.80	394.5	11.66
259.5	12.42	257.6	10.42	220.8	12.68	194.4	11.39
180.2	10.11	155.4	9.84	149.5	11.87	147.0	11.49
97.7	11.83	92.3	10.22	81.0	8.88	76.4	9.54
71.6	9.66	65.1	7.21	63.6	8.80	50.2	7.90
39.2	4.47	33.5	7.34	26.0	4.29	18.2	2.08
11.6	1.65	9.2	1.08	6.3	.90	5.2	.45
4.3	.55	2.7	.24	2.4	.33	1.6	.18
1.5	.07	.0	.07	.0	.04		

PARAMETER VALUES

PS : 14.89	ALPHA : .200	BETA : .0107
(13.81, 15.97)	(.186, .215)	(.0077, .0137)

SAMPLE TEMPERATURE 9.4 C INCUBATION TEMPERATURE 6.8 C

CHLOROPHYLL :	1.81	RNA :	56.80	PHOSPHATE :	.07
CARBON :	317.50	DNA :	24.20	NITRATE :	.03
NITROGEN :	60.00	ATP :	1.69	SILICATE :	2.31
				AMMONIA :	.16

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 14 06 78 DEPTH 10M

I	P	I	P	I	P	I	P
910.9	3.26	788.7	3.97	619.5	7.31	479.7	7.54
473.9	8.72	470.1	8.73	457.5	7.74	394.5	10.54
390.2	9.36	259.5	9.10	235.4	8.38	220.8	7.88
180.2	9.70	169.2	6.70	155.4	6.78	149.5	7.88
97.7	8.50	92.3	6.21	89.3	5.68	81.0	5.41
73.4	5.38	71.6	6.47	65.1	5.09	50.2	5.55
44.2	3.37	34.5	2.87	33.5	4.41	20.6	1.88
13.2	1.48	10.9	.92	7.7	.59	5.5	.65
3.8	.26	2.9	.43	1.8	.18	1.8	.13
1.5	.09	1.4	.05	1.0	.02		

PARAMETER VALUES

PS : 23.80 ALPHA : .098 BETA : .0468

(12.97, 34.64) (.091, .105) (.0114, .0823)

SAMPLE TEMPERATURE 4.1 C INCUBATION TEMPERATURE 6.8 C

CHLOROPHYLL :	1.66	RNA :	38.67	PHOSPHATE :	.15
CARBON :	454.50	DNA :	15.43	NITRATE :	.03
NITROGEN :	93.50	ATP :	.98	SILICATE :	2.13
				AMMONIA :	.16

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 21 06 78 DEPTH 5M

I	P	I	P	I	P	I	P
947.8	.95	820.6	1.59	653.4	2.89	528.7	3.40
480.8	3.02	463.9	3.43	457.8	3.14	398.4	3.62
375.7	3.50	264.7	3.65	222.4	3.05	201.5	3.82
182.3	3.05	179.7	3.32	175.2	3.59	141.5	3.44
114.3	3.39	91.1	2.84	84.9	3.44	76.4	3.03
75.4	3.42	64.4	2.87	58.5	3.45	46.6	2.90
44.6	3.17	38.4	2.80	37.6	1.58	30.9	1.68
16.9	.84	12.8	.78	8.8	.42	5.5	.37
4.8	.27	3.1	.13	2.9	.20	2.1	.10
1.6	.04	1.5	.05	1.0	.04	.0	.02

PARAMETER VALUES

PS : 4.45	ALPHA : .085	BETA : .0040
(4.12, 4.79)	(.077, .093)	(.0029, .0051)

SAMPLE TEMPERATURE 4.5 C INCUBATION TEMPERATURE 4.9 C

CHLOROPHYLL	: 6.13	RNA	:	38.32	PHOSPHATE	:	.10
CARBON	:314.00	DNA	:	15.14	NITRATE	:	.03
NITROGEN	: 56.00	ATP	:	-	SILICATE	:	.89
					AMMONIA	:	.00

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 21 06 78 DEPTH 12M

T	P	I	P	I	P	I	P
947.8	1.03	820.6	1.70	653.4	2.82	480.8	3.32
472.8	2.64	457.8	3.44	418.8	3.56	398.4	3.54
375.7	3.31	264.7	3.56	201.5	3.59	193.1	3.34
185.3	3.16	179.7	3.51	175.2	3.55	141.5	3.21
114.3	3.77	89.0	3.07	84.9	2.53	76.4	2.77
75.7	3.64	72.9	2.91	58.5	3.23	46.6	2.50
44.6	2.76	41.9	1.63	38.4	2.06	29.2	1.11
21.7	.86	13.2	.65	10.2	.39	6.3	.18
5.8	.26	3.4	.10	3.4	.17	2.4	.06
1.8	.03	1.6	.02	1.0	.03		

PARAMETER VALUES

PS : 4.98	ALPHA : .066	BETA : .0056
(4.50, 5.47)	(.061, .072)	(.0040, .0072)

SAMPLE TEMPERATURE 4.5 C INCUBATION TEMPERATURE 4.9 C

CHLOROPHYLL :	6.06	RNA :	50.87	PHOSPHATE :	.07
CARBON :	255.50	DNA :	13.78	NITRATE :	.00
NITROGEN :	40.00	ATP :	-	SILICATE :	.80
				AMMONIA :	.14

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 28 06 78   DEPTH 5M

I	P	I	P	I	P	I	P
961.7	.86	841.5	1.44	625.5	2.92	510.2	3.19
493.1	3.46	482.8	3.43	455.1	3.18	411.8	3.98
371.7	3.64	278.8	3.74	240.2	3.43	222.1	3.67
218.2	3.38	199.5	3.92	166.6	3.69	161.7	3.65
99.6	3.45	98.6	2.98	94.7	3.53	94.3	3.24
73.4	3.49	56.3	2.83	54.5	2.99	54.1	2.56
52.3	2.62	40.6	1.76	37.6	2.23	28.7	1.53
18.5	.86	11.6	.68	9.2	.59	5.8	.29
5.5	.39	3.1	.14	2.9	.16	2.1	.10
1.8	.08	1.6	.06	1.4	.03	1.4	.01

PARAMETER VALUES

PS : 5.50   ALPHA : .068   BETA : .0068

(5.03, 5.97)   (.064, .073)   (.0052, .0084)

SAMPLE TEMPERATURE 6.3 C   INCUBATION TEMPERATURE 5.0 C

CHLOROPHYLL : 3.76   RNA : 51.57   PHOSPHATE : .08

CARBON :402.00   DNA : 20.43   NITRATE : .00

NITROGEN : 67.50   ATP : 2.60   SILICATE : .13

AMMONIA : .29

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 28 06 78 DEPTH 14M

I	P	I	P	I	P	I	P
961.7	.90	841.5	1.34	625.5	2.23	493.1	2.37
482.8	2.62	463.6	2.79	411.8	2.84	388.9	2.65
371.7	2.74	278.8	2.82	222.1	2.91	199.5	2.76
180.8	2.79	172.1	2.66	166.6	2.96	161.7	2.69
99.6	3.23	94.7	3.14	94.3	2.53	80.7	2.50
73.4	2.97	66.2	2.33	54.5	2.60	54.1	2.32
52.3	2.34	37.6	1.83	31.9	1.68	31.9	1.34
16.6	1.02	12.2	.77	9.5	.50	6.0	.34
5.8	.31	3.4	.12	2.9	.17	2.4	.06
1.8	.07	1.4	.04	.0	.02	.0	.01

PARAMETER VALUES

PS : 3.73 ALPHA : .071 BETA : .0037

(3.52, 3.93) (.066, .076) (.0030, .0043)

SAMPLE TEMPERATURE 3.7 C INCUBATION TEMPERATURE 5.0 C

CHLOROPHYLL :	11.00	RNA :	53.31	PHOSPHATE :	.14
CARBON :	629.00	DNA :	14.99	NITRATE :	.00
NITROGEN :	90.50	ATP :	2.99	SILICATE :	.92
				AMMONIA :	.16

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 05 07 78 DEPTH 5M

I	P	I	P	I	P	I	P
926.2	2.42	770.8	2.48	616.5	3.71	506.7	3.97
488.0	4.04	473.9	3.61	464.5	3.76	384.9	4.02
362.8	4.31	270.3	4.05	239.1	4.33	203.0	3.73
179.3	3.56	173.3	4.14	125.6	3.49	113.7	3.03
83.0	4.32	79.7	2.40	75.0	3.65	66.2	3.69
65.5	3.40	63.2	3.89	56.7	1.87	44.9	3.57
38.4	3.02	37.2	2.05	25.4	2.03	17.5	.92
12.5	.86	7.7	.40	5.8	.39	4.3	.20
3.4	.18	2.9	.29	2.4	.07	1.8	.00
1.6	.24	1.0	.04	.0	.01		

PARAMETER VALUES

PS : 4.62 ALPHA : .091 BETA : .0024

(4.23, 5.00) (.081, .100) (.0013, .0034)

SAMPLE TEMPERATURE 4.6 C INCUBATION TEMPERATURE 5.9 C

CHLOROPHYLL	: 3.48	RNA	:	54.05	PHOSPHATE	:	.06
CARBON	:485.50	DNA	:	22.41	NITRATE	:	.06
NITROGEN	: 85.00	ATP	:	1.55	SILICATE	:	.53
					AMMONIA	:	.03

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 05 07 78   DEPTH 13M

I	P	I	P	I	P	I	P
926.2	1.75	770.8	2.04	498.0	2.55	473.9	3.01
462.9	2.69	384.9	3.33	366.7	2.95	362.8	2.48
270.3	3.20	203.0	2.74	198.4	3.37	176.6	2.66
173.3	3.13	165.1	2.65	125.6	3.01	113.7	3.06
79.7	3.15	75.0	2.72	69.5	3.13	66.2	2.15
65.9	2.21	63.2	2.62	56.7	2.06	44.9	1.98
37.2	1.40	31.4	1.40	24.4	1.31	14.7	.66
10.9	.65	7.3	.35	5.8	.28	3.8	.24
2.7	.19	2.4	.10	1.6	.03	1.5	.05
1.4	.02	.0	.02				

PARAMETER VALUES

PS :	3.71	ALPHA :	.065	BETA :	.0026
	(3.47, 3.94)		(.060, .070)		(.0019, .0034)

SAMPLE TEMPERATURE 3.5 C   INCUBATION TEMPERATURE 5.9 C

CHLOROPHYLL :	10.16	RNA :	54.94	PHOSPHATE :	.06
CARBON :	823.00	DNA :	16.67	NITRATE :	.00
NITROGEN :	139.00	ATP :	3.63	SILICATE :	.26
				AMMONIA :	.16

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 19 07 78   DEPTH 5M

I	P	I	P	I	P	I	P
770.8	2.83	616.5	2.67	488.0	3.02	477.4	3.30
473.8	4.24	454.2	4.28	384.9	3.10	362.8	3.39
270.3	3.27	227.6	4.57	203.0	3.82	198.4	2.98
190.0	4.29	173.3	3.23	125.6	3.04	113.7	3.20
79.7	3.22	75.7	3.94	75.0	3.12	75.0	3.71
66.2	2.94	63.2	3.27	56.7	2.51	44.9	2.17
39.2	2.10	37.2	1.63	29.8	1.76	17.8	.95
13.8	.86	11.6	.43	7.7	.34	5.2	.22
3.1	.09	2.7	.21	2.1	.06	2.1	.06
1.6	.02	1.5	.01	1.4	.01		

PARAMETER VALUES

PS : 4.28   ALPHA : .078   BETA : .0022

(3.90, 4.67)   (.070, .086)   (.0011, .0033)

SAMPLE TEMPERATURE 5.5 C   INCUBATION TEMPERATURE 15.5 C

CHLOROPHYLL :	4.46	RNA :	100.33	PHOSPHATE :	.16
CARBON :	631.00	DNA :	19.93	NITRATE :	.18
NITROGEN :	96.00	ATP :	2.09	SILICATE :	.19
				AMMONIA :	.06

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 19 07 78 DEPTH 10M

I	P	I	P	I	P	T	P
770.8	2.60	616.5	3.23	488.0	3.76	473.9	3.44
384.9	3.83	362.8	3.73	270.3	3.46	203.0	3.74
198.4	3.23	173.3	3.40	113.7	3.12	79.7	2.96
77.1	2.03	75.0	3.58	66.9	1.79	66.2	3.36
63.2	2.61	56.7	2.88	44.9	2.04	39.2	1.29
37.2	1.53	24.4	.97	19.8	.74	10.9	.37
10.6	.29	5.8	.10	5.5	.21	3.4	.11
2.9	.06	2.4	.04	2.1	.02	1.5	.00
1.4	.01	1.4	.00				

PARAMETER VALUES

PS : 4.44 ALPHA : .058 BETA : .0024

(3.91, 4.98) (.053, .063) (.0010, .0038)

SAMPLE TEMPERATURE 4.4 C INCUBATION TEMPERATURE 15.5 C

CHLOROPHYLL :	5.64	RNA :	94.10	PHOSPHATE :	.42
CARBON :	760.00	DNA :	14.19	NITRATE :	.08
NITROGEN :	114.50	ATP :	2.07	SILICATE :	1.06
				AMMONIA :	.14

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 26 07 78 DEPTH 5M

I	P	I	P	I	P	I	P
902.3	3.26	497.0	3.95	489.5	3.50	446.7	3.35
319.9	3.59	231.8	3.34	177.5	4.02	166.9	3.27
104.9	3.44	78.8	3.51	74.2	2.50	65.9	2.90
64.0	2.88	48.9	2.57	35.0	1.27	35.0	1.51
34.0	2.06	26.0	1.50	14.7	.62	12.2	.43
7.3	.25	5.5	.24	4.8	.17	2.7	.07
2.4	.13	1.6	.01	1.4	.00	1.0	.02
.0	.00						

PARAMETER VALUES

PS : 4.01 ALPHA : .070 BETA : .0010

(3.71, 4.31) (.064, .075) (.0003, .0017)

SAMPLE TEMPERATURE 9.8 C INCUBATION TEMPERATURE 6.0 C

CHLOROPHYLL	: 5.71	RNA	:	63.40	PHOSPHATE	:	.27
CARBON	:693.00	DNA	:	21.17	NITRATE	:	.08
NITROGEN	:125.50	ATP	:	1.80	SILICATE	:	.58
					AMMONIA	:	-

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 26 07 78 DEPTH 12M

I	P	I	P	I	P	I	P
802.3	2.42	618.7	3.12	497.0	3.36	455.3	3.80
417.8	3.91	340.4	4.32	319.9	3.49	224.8	4.55
185.3	4.30	177.5	4.04	177.1	3.74	140.6	3.47
123.4	4.45	104.9	3.80	78.8	3.60	75.9	2.65
75.2	3.95	72.7	4.16	65.9	4.00	55.4	2.24
48.9	3.29	44.2	3.50	38.0	1.45	34.0	3.12
28.1	.86	26.0	2.63	21.7	.72	9.2	.31
8.8	.30	4.3	.15	3.8	.09	2.7	.09
1.8	.05	1.6	.04	1.5	.01	1.4	.01
1.0	.02	.0	.01				

PARAMETER VALUES

PS : 5.18 ALPHA : .087 BETA : .0043

(4.59, 5.76) (.078, .096) (.0024, .0062)

SAMPLE TEMPERATURE 5.8 C INCUBATION TEMPERATURE 6.0 C

CHLOROPHYLL	: 5.64	RNA	: 73.63	PHOSPHATE	: .41
CARBON	:635.50	DNA	: 20.86	NITRATE	: .05
NITROGEN	:111.50	ATP	: 1.93	SILICATE	: .67
				AMMONIA	: -

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 02 08 78   DEPTH 5M

I	P	I	P	I	P	I	P
618.7	2.49	519.5	2.11	473.3	2.31	455.3	2.08
340.4	2.32	332.2	1.75	224.8	2.16	185.3	2.42
182.5	2.18	123.4	2.28	119.1	1.69	75.2	2.52
72.7	2.40	68.9	2.12	45.2	1.27	44.2	1.82
28.1	1.45	20.9	.54	11.2	.81	10.6	.46
5.2	.38	5.2	.18	3.4	.08	2.7	.17
2.4	.06	1.8	.07	1.6	.00	1.5	.04
1.0	.01						

PARAMETER VALUES

PS : 2.27   ALPHA : .067   BETA : .0001

(2.09, 2.46)   (.057, .076)   (-.0004, .0006)

SAMPLE TEMPERATURE 12.6 C   INCUBATION TEMPERATURE 8.5 C

CHLOROPHYLL	: 8.98	RNA	:	87.45	PHOSPHATE	:	.17
CARBON	:784.00	DNA	:	32.34	NITRATE	:	.08
NITROGEN	:119.50	ATP	:	2.90	SILICATE	:	1.10
					AMMONIA	:	-

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 02 08 78 DEPTH 10M

I	P	I	P	I	P	I	P
802.3	1.19	497.0	2.49	470.6	3.00	438.5	2.85
319.9	2.87	231.8	2.77	177.5	2.79	168.3	3.27
104.9	2.80	85.5	2.64	78.9	2.94	74.2	2.42
65.9	2.33	48.9	2.85	36.4	1.84	34.0	2.35
31.9	1.12	26.0	2.07	18.5	.88	11.9	.86
9.9	.45	5.8	.50	5.2	.24	3.1	.11
2.9	.12	2.4	.04	1.8	.10	1.6	.01
1.5	.01	1.4	.00				

PARAMETER VALUES

PS : 3.73	ALPHA : .075	BETA : .0034
(3.35, 4.10)	(.068, .083)	(.0021, .0047)

SAMPLE TEMPERATURE 7.1 C INCUBATION TEMPERATURE 8.5 C

CHLOROPHYLL :	8.01	RNA :	112.98	PHOSPHATE :	.32
CARBON :	785.00	DNA :	19.38	NITRATE :	.07
NITROGEN :	126.50	ATP :	3.42	SILICATE :	1.33
				AMMONIA :	-

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 16 08 78 DEPTH 5M

I	P	I	P	I	P	I	P
782.3	6.43	585.9	6.30	496.6	6.84	443.9	7.06
363.1	7.02	261.5	6.62	215.3	6.68	188.0	7.04
160.0	6.01	122.9	6.43	102.9	5.99	80.0	5.11
75.4	5.78	72.1	3.38	69.2	4.61	68.6	3.11
48.1	3.88	44.9	3.16	41.6	1.62	37.2	2.73
33.0	1.59	16.3	.88	13.5	.68	8.8	.35
6.6	.25	4.3	.21	3.4	.08	3.1	.03
2.9	.10	2.9	.01	1.8	.07	1.4	.04
.0	.00						

PARAMETER VALUES

PS : 8.47	ALPHA : .087	BETA : .0035
(7.44, 9.50)	(.080, .093)	(.0011, .0059)

SAMPLE TEMPERATURE 10.0 C INCUBATION TEMPERATURE 10.5 C

CHLOROPHYLL : 3.27	RNA : 71.41	PHOSPHATE : .23
CARBON :533.50	DNA : 23.49	NITRATE : .05
NITROGEN : 89.00	ATP : 2.20	SILICATE : .96
		AMMONIA : -

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 16 08 78 DEPTH 12M

I	P	I	P	I	P	I	P
782.3	3.47	585.9	4.12	496.6	3.72	490.4	4.82
461.8	3.84	443.9	4.52	363.1	3.76	261.5	4.06
215.3	3.30	195.9	4.08	193.7	4.30	188.0	4.32
160.0	3.55	122.9	4.04	102.9	4.89	80.0	4.97
75.4	3.80	72.1	3.08	69.2	3.06	68.6	4.87
48.1	2.87	44.9	3.06	41.6	1.30	37.2	2.12
33.0	1.32	16.3	.68	13.5	.54	8.8	.32
6.6	.17	4.3	.33	3.4	.08	3.1	.08
2.9	.03	2.9	.07	1.8	.00	1.4	[illegible]
.0	.01						

PARAMETER VALUES

PS : 4.56	ALPHA : .089	BETA : .0014
(4.17, 5.15)	(.077, .101)	(.0001, .0027)

SAMPLE TEMPERATURE 7.6 C INCUBATION TEMPERATURE 10.5 C

CHLOROPHYLL : 6.52	RNA : 79.86	PHOSPHATE : .41
CARBON : 793.50	DNA : 24.27	NITRATE : .06
NITROGEN : 121.50	ATP : 3.56	SILICATE : 2.01
		AMMONIA : -

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 27 9 78   DEPTH 5M

I	P	I	P	I	P	I	P
558.5	4.73	484.8	4.69	448.0	5.12	405.0	4.61
334.5	5.67	319.1	5.31	306.9	5.29	306.9	5.58
276.8	5.20	245.5	5.13	239.7	5.87	221.2	5.14
219.4	5.76	214.2	5.38	199.2	5.20	187.2	5.08
185.6	5.39	181.7	5.25	172.6	4.05	162.9	4.67
155.9	5.03	152.8	5.53	147.9	4.86	131.3	5.28
128.3	5.15	125.2	4.19	119.4	4.75	117.2	4.68
116.9	4.70	108.0	5.61	100.7	4.41	93.6	4.55
91.1	4.94	89.6	4.00	78.3	4.12	73.0	3.74
71.5	3.13	63.8	3.32	63.8	3.84	50.6	3.17
44.5	3.24	40.5	2.72	32.2	1.61	22.1	1.80
14.7	1.10	10.4	.80	7.1	.45	5.5	.35
3.1	.17	2.3	.20	1.8	.05	1.5	.12
.9	.06	.9	.05	.3	.06		

PARAMETER VALUES

PS :	6.28	ALPHA :	.087	BETA :	.0033
(5.84,	6.72)	(.082,	.092)	(.0018,	.0047)

SAMPLE TEMPERATURE 13.7 C   INCUBATION TEMPERATURE 13.0 C

CHLOROPHYLL :	3.59	RNA :	29.13	PHOSPHATE :	.39
CARBON :	385.00	DNA :	7.22	NITRATE :	.05
NITROGEN :	58.00	ATP :	.80	SILICATE :	1.44
				AMMONIA :	.05

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 27 09 78 DEPTH 20M

I	P	I	P	I	P	I	P
629.0	1.52	583.0	1.58	521.7	1.80	478.7	1.72
426.5	1.82	423.5	1.74	365.2	1.84	362.1	2.24
359.0	1.80	337.5	1.90	304.7	2.09	301.0	2.37
299.8	2.61	279.2	1.70	267.3	2.15	227.1	2.12
220.0	2.22	210.2	1.74	208.0	2.21	205.6	2.47
205.6	1.82	189.6	2.05	172.5	2.57	164.2	2.05
162.3	1.83	159.0	2.34	151.0	1.58	144.2	2.18
138.7	1.74	128.9	2.42	128.3	1.60	113.8	2.06
112.0	2.37	112.0	1.93	107.7	1.56	88.7	2.12
84.1	2.30	82.2	1.50	70.6	2.09	64.8	2.21
58.0	1.80	53.4	2.11	52.5	1.84	41.7	1.78
37.7	1.60	19.6	.85	17.8	1.01	11.1	.63
9.8	.47	4.9	.33	3.1	.22	2.8	.27
2.2	.07	1.8	.12	1.5	.02	.9	.06

PARAMETER VALUES

PS : 2.28	ALPHA : .073	BETA : .0011
(2.17, 2.40)	(.064, .082)	(.0007, .0015)

SAMPLE TEMPERATURE 9.2 C INCUBATION TEMPERATURE 13.0 C

CHLOROPHYLL	: 5.31	RNA	: 27.80	PHOSPHATE	: .97
CARBON	:834.50	DNA	: 12.49	NITRATE	: .90
NITROGEN	:104.50	ATP	: 2.52	SILICATE	: 4.91
				AMMONIA	: .67

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 11 10 78 DEPTH 5M

T	P	T	P	I	P	I	P
598.4	.80	598.4	.61	598.4	.49	560.0	.82
506.3	.96	475.6	.80	460.3	1.02	460.3	.98
402.0	1.04	398.9	1.08	368.2	1.08	352.9	1.19
343.7	1.19	337.5	.98	314.5	1.00	306.9	1.04
294.6	1.13	276.2	.91	267.0	1.15	260.8	.92
259.3	1.05	257.8	.85	240.9	1.39	211.7	1.00
205.4	1.37	201.0	1.09	199.5	1.25	196.4	.96
184.1	.87	165.7	.94	164.2	1.10	161.1	1.19
156.5	1.17	142.7	.93	133.5	.98	107.4	.83
99.7	1.05	98.2	.89	56.8	.75	56.7	.65
26.7	.45	25.5	.34	14.0	.25	13.7	.26
9.8	.14	7.6	.11	6.0	.10	4.6	.07
2.9	.05	2.6	.03	1.8	.02	1.7	.01

PARAMETER VALUES

PS : 1.79 ALPHA : .016 BETA : .0026

(1.46, 2.12) (.014, .018) (.0014, .0038)

SAMPLE TEMPERATURE 12.3 C INCUBATION TEMPERATURE 12.0 C

CHLOROPHYLL	: 16.24	RNA	: 66.51	PHOSPHATE	: .47
CARBON	:664.00	DNA	: 25.82	NITRATE	: .32
NITROGEN	:106.00	ATP	: 4.65	SILICATE	: 1.45
				AMMONIA	: .06

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 11 10 78 DEPTH 12M

T	P	T	P	T	P	T	P
629.0	.55	613.7	.87	598.4	.90	575.3	.69
567.7	.75	537.0	.67	521.6	1.04	498.6	.85
460.3	.73	452.6	.90	429.6	.89	414.3	1.01
398.9	1.02	362.1	.99	337.5	1.02	314.5	1.17
314.5	1.15	270.0	1.04	262.4	1.03	237.8	1.04
219.4	1.08	208.7	.94	191.8	1.05	190.3	1.05
182.6	.90	179.5	1.10	159.6	1.07	153.4	1.16
136.6	1.12	128.9	.80	124.3	1.20	95.1	.59
70.6	.59	49.1	.45	25.6	.25	19.3	.23
12.0	.16	9.7	.16	7.1	.07	6.6	.07
5.2	.06	2.8	.02	2.6	.02	1.6	.01
1.5	.00	.9	.01				

PARAMETER VALUES

PS : 2.07 (1.44, 2.71)

ALPHA : .013 (.012, .014)

BETA : .0035 (.0014, .0057)

SAMPLE TEMPERATURE 12.3 C

INCUBATION TEMPERATURE 12.0 C

CHLOROPHYLL :	13.93	RNA :	51.83	PHOSPHATE :	.53
CARBON :	764.00	DNA :	25.82	NITRATE :	.28
NITROGEN :	123.00	ATP :	3.33	SILICATE :	1.42
				AMMONIA :	.99

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 18 10 78 DEPTH 5M

I	P	I	P	I	P	I	P
645.3	1.40	613.5	1.37	613.5	1.20	581.8	1.11
571.2	1.79	571.2	1.32	560.7	1.38	550.1	1.70
518.3	1.96	486.6	1.74	465.4	1.45	457.0	1.91
444.3	1.68	408.3	1.59	406.2	1.80	402.0	1.45
350.7	1.43	347.0	1.65	334.3	1.65	287.7	1.64
283.5	1.87	281.4	1.56	272.9	1.82	262.3	1.69
245.4	1.48	234.8	1.54	234.8	1.93	228.5	1.62
222.1	1.34	222.1	1.68	194.6	1.79	194.6	1.77
165.0	1.64	158.7	1.59	156.6	1.52	139.6	1.61
122.7	1.78	115.0	1.30	114.2	1.60	86.7	1.46
63.5	1.12	44.4	.89	34.7	.57	32.2	.54
16.1	.26	15.2	.33	10.6	.19	8.5	.20
6.4	.10	4.9	.12	4.2	.05	3.0	.08
2.1	.03						

PARAMETER VALUES

PS : 2.06 ALPHA : .026 BETA : .0012

(1.88, 2.24) (.023, .028) (.0007, .0017)

SAMPLE TEMPERATURE 11.9 C INCUBATION TEMPERATURE 12.6 C

CHLOROPHYLL :	11.62	RNA :	47.38	PHOSPHATE :	.72
CARBON :	1828.50	DNA :	20.70	NITRATE :	.71
NITROGEN :	114.00	ATP :	3.22	SILICATE :	2.64
				AMMONIA :	1.73

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 18 10 78 DEPTH 13M

T	P	T	P	T	P	T	P
643.2	.86	613.5	1.04	571.2	.91	571.2	.84
528.9	1.19	486.6	.93	486.6	1.02	486.6	1.16
465.4	.94	444.3	1.20	423.1	1.22	423.1	1.02
421.0	1.18	399.9	1.35	397.7	1.08	351.2	1.35
340.6	1.16	338.5	1.20	325.8	1.11	315.2	1.08
306.8	1.21	285.6	1.11	268.7	1.41	245.4	1.12
241.2	.99	234.8	1.09	234.8	1.18	230.6	1.19
207.3	1.31	194.6	1.19	194.6	1.27	192.5	1.08
179.8	1.40	173.5	.95	160.8	1.14	160.8	1.43
158.7	1.27	154.4	1.06	131.2	1.01	116.4	.99
116.4	1.24	112.1	.98	59.2	.77	52.9	.74
30.3	.46	27.9	.46	16.7	.24	15.2	.23
9.5	.16	9.3	.14	6.6	.12	5.9	.08
4.7	.05	4.0	.04	3.4	.03	2.8	.03

PARAMETER VALUES

PS : 1.57 ALPHA : .018 BETA : .0013

(1.42, 1.72) (.017, .020) (.0008, .0017)

SAMPLE TEMPERATURE 11.9 C INCUBATION TEMPERATURE 12.6 C

CHLOROPHYLL	: 10.86	RNA	:	36.25	PHOSPHATE	:	.75
CARBON	:773.00	DNA	:	16.83	NITRATE	:	.82
NITROGEN	:108.50	ATP	:	2.60	SILICATE	:	2.88
					AMMONIA	:	-

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 25 10 78 DEPTH 5M

I	P	I	P	I	P	I	P
624.1	1.27	613.5	1.30	581.8	1.18	571.2	1.53
550.1	1.81	497.2	1.52	486.6	1.64	454.9	1.50
423.1	1.67	423.1	1.49	395.6	1.62	378.7	1.57
359.7	1.58	342.7	1.76	336.4	1.75	330.0	1.67
306.8	1.78	275.0	1.45	268.7	1.76	258.1	1.69
258.1	1.71	247.5	1.65	237.0	1.76	222.1	1.65
220.0	1.60	217.9	1.73	194.6	1.82	186.2	1.57
182.0	1.78	173.5	1.44	162.9	1.64	160.8	1.56
139.6	1.61	139.6	1.41	131.2	1.49	131.2	1.66
120.6	1.46	110.0	1.57	107.9	1.48	105.8	1.61
93.1	1.46	55.0	1.01	44.4	1.09	36.4	.55
36.4	.74	21.6	.35	20.7	.27	14.0	.18
12.1	.13	8.5	.09	7.4	.06	4.7	.04
4.2	.05	3.4	.01	3.2	.02		

PARAMETER VALUES

PS : 2.19 (2.02, 2.35)

ALPHA : .025 (.023, .027)

BETA : .0016 (.0011, .0021)

SAMPLE TEMPERATURE 11.2 C

INCUBATION TEMPERATURE 12.3 C

CHLOROPHYLL	: 11.11	RNA	: 40.26	PHOSPHATE	: .57
CARBON	:571.00	DNA	: 16.67	NITRATE	: .45
NITROGEN	: 84.50	ATP	: 2.62	SILICATE	: 2.56
				AMMONIA	: .55

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 25 10 78   DEPTH 13M

I	P	I	P	I	P	I	P
634.7	1.65	634.7	1.48	613.5	1.54	571.2	1.55
539.5	1.83	528.9	1.71	528.9	1.68	465.4	1.94
454.9	2.05	444.3	2.06	444.3	1.89	414.7	2.17
397.7	1.89	378.7	2.16	370.2	1.92	368.1	1.74
306.8	1.84	294.1	1.80	292.0	1.96	275.0	1.69
260.2	1.75	253.9	2.12	253.9	2.01	253.9	1.94
222.1	2.12	217.9	2.07	205.2	2.29	201.0	1.92
177.7	2.07	173.5	2.15	173.5	2.05	167.1	2.04
152.3	2.07	148.1	1.81	139.6	1.94	133.3	1.85
131.2	2.03	120.6	1.92	120.6	2.28	116.4	1.72
112.1	1.76	103.7	1.87	52.9	1.30	48.7	1.15
30.9	.71	27.5	.76	19.0	.33	17.1	.44
11.0	.22	10.6	.18	7.6	.09	7.2	.15
5.1	.03	4.4	.08	3.3	.02	2.6	.03

PARAMETER VALUES

PS : 2.58   ALPHA : .033   BETA : .0019

(2.41, 2.75)   (.031, .035)   (.0014, .0024)

SAMPLE TEMPERATURE 11.5 C   INCUBATION TEMPERATURE 12.3 C

CHLOROPHYLL :	4.91	RNA :	32.69	PHOSPHATE :	.85
CARBON :	464.50	DNA :	17.29	NITRATE :	.89
NITROGEN :	68.50	ATP :	2.18	SILICATE :	3.63
				AMMONIA :	1.88

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 8 11 78 DEPTH 5M

I	P	I	P	I	P	I	P
626.2	.41	626.2	.50	588.2	1.97	541.6	1.09
524.7	1.29	473.9	.88	408.3	2.34	389.3	1.99
334.3	2.34	332.2	1.90	317.4	2.27	279.3	2.05
228.5	2.57	217.9	2.42	211.6	2.54	207.3	2.41
169.3	2.40	156.6	1.96	154.4	2.98	152.3	2.40
152.3	2.08	148.1	2.02	110.0	2.13	108.7	1.88
108.3	2.07	102.8	1.57	101.6	2.56	93.9	2.43
80.4	1.73	79.1	1.86	70.7	2.31	64.3	1.34
53.3	1.55	47.0	2.05	45.7	2.23	38.1	2.05
38.1	2.09	37.7	1.59	35.5	1.46	20.1	1.05
17.4	.95	11.2	.48	9.7	.47	5.7	.21
5.3	.20	3.3	.15	3.0	.14	2.0	.06
1.8	.06	1.4	.05	1.1	.04		

PARAMETER VALUES

PS : 3.42 ALPHA : .056 BETA : .0061

(2.95, 3.89) (.049, .062) (.0039, .0082)

SAMPLE TEMPERATURE 9.6 C INCUBATION TEMPERATURE 9.0 C

CHLOROPHYLL	: 14.18	RNA	:	38.92	PHOSPHATE	:	.93
CARBON	:604.50	DNA	:	16.52	NITRATE	:	2.06
NITROGEN	: 96.50	ATP	:	1.21	SILICATE	:	4.17
					AMMONIA	:	.44

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 08 11 78 DEPTH 13M

I	P	I	P	I	P	I	P
634.7	.62	592.4	1.59	583.9	1.78	571.2	.59
507.8	1.42	490.8	1.85	457.0	1.56	389.3	2.23
380.8	1.90	372.4	2.17	268.7	2.09	245.4	1.93
241.2	1.94	237.0	1.75	203.1	1.92	188.3	1.65
165.0	2.22	160.8	1.79	139.6	1.62	137.5	1.66
135.4	1.91	114.3	1.99	104.9	2.15	102.0	1.71
99.4	1.53	88.0	1.60	87.2	1.60	80.4	1.95
74.9	1.48	71.1	1.97	69.8	1.22	64.3	1.35
61.4	1.83	51.6	1.84	47.0	1.66	36.8	1.09
36.4	1.58	33.4	1.32	30.0	1.10	19.5	.60
14.9	.53	10.2	.32	8.9	.25	5.6	.15
5.1	.12	3.6	.09	3.2	.07	2.0	.04
1.8	.05	1.3	.01	1.0	.02		

PARAMETER VALUES

PS : 2.34	ALPHA : .047	BETA : .0021
(2.12, 2.57)	(.041, .053)	(.0013, .0029)

SAMPLE TEMPERATURE 8.1 C INCUBATION TEMPERATURE 9.0 C

CHLOROPHYLL	: 7.27	RNA	: 25.13	PHOSPHATE	: 1.03
CARBON	:1458.00	DNA	: 13.88	NITRATE	: 3.16
NITROGEN	: 67.00	ATP	: .70	SILICATE	: 5.18
				AMMONIA	: .97

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 15 11 78 DEPTH 5M

I	P	I	P	I	P	I	P
626.2	.94	622.0	1.31	575.5	1.10	524.7	1.39
503.5	1.30	482.4	1.93	452.8	1.65	380.8	1.94
322.4	1.90	312.3	1.53	305.5	1.73	248.8	2.09
237.0	1.88	228.9	1.87	228.5	1.81	194.6	1.87
181.1	1.90	175.6	1.39	173.5	1.94	171.4	1.81
150.2	1.79	137.5	1.48	135.4	1.33	133.3	1.89
119.5	1.68	114.3	2.18	104.9	1.83	97.3	1.77
95.2	1.31	90.1	1.66	78.3	1.74	76.2	1.57
75.7	1.29	49.1	1.12	35.1	1.08	26.2	.67
17.4	.59	13.8	.32	8.3	.19	8.3	.29
5.8	.14	5.0	.21	3.5	.09	3.4	.07
2.4	.05	1.7	.02				

PARAMETER VALUES

PS : 2.51 ALPHA : .033 BETA : .0028

(2.24, 2.78) (.030, .036) (.0019, .0038)

SAMPLE TEMPERATURE 8.3 C INCUBATION TEMPERATURE 9.6 C

CHLOROPHYLL :	7.86	RNA :	20.68	PHOSPHATE :	.97
CARBON :	385.00	DNA :	13.88	NITRATE :	3.02
NITROGEN :	52.50	ATP :	1.73	SILICATE :	5.59
				AMMONIA :	1.07

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 15 11 78 DEPTH 15M

I	P	I	P	T	P	I	P
647.4	.20	643.2	.18	609.3	.79	609.3	.72
567.0	.73	550.1	.67	516.2	1.21	499.3	1.14
482.4	1.20	414.7	1.28	396.9	1.10	364.7	1.64
336.4	1.33	300.4	1.29	280.1	1.73	272.5	1.77
233.6	1.64	222.6	1.28	220.0	1.25	205.2	1.55
156.6	1.72	150.2	1.73	137.5	1.69	132.0	1.57
130.3	1.34	106.6	1.37	102.8	1.40	102.4	1.51
101.6	1.44	95.6	1.59	84.2	1.27	81.7	1.02
81.2	1.40	72.8	1.43	71.9	1.27	66.9	1.65
40.6	.85	29.2	.73	18.6	.52	16.1	.51
10.7	.24	10.4	.18	6.7	.13	5.8	.08
4.9	.07	3.4	.07	2.7	.04	1.8	.01
1.8	.03	1.3	.02				

PARAMETER VALUES

PS : 4.04	ALPHA : .027	BETA : .0116
(2.61, 5.47)	(.024, .029)	(.0049, .0184)

SAMPLE TEMPERATURE 8.1 C INCUBATION TEMPERATURE 9.6 C

CHLOROPHYLL : 9.14	RNA : 24.68	PHOSPHATE : 1.12
CARBON : 468.00	DNA : 15.59	NITRATE : 3.31
NITROGEN : 63.00	ATP : 2.06	SILICATE : 5.93
		AMMONIA : 1.11

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 22 11 78 DEPTH 5M

I	P	I	P	I	P	I	P
644.4	.42	613.7	.68	598.4	.73	567.7	.92
552.3	.98	506.3	.96	429.6	.98	383.6	1.16
368.2	1.23	337.5	1.25	322.2	1.47	260.8	1.41
257.8	1.04	253.2	1.13	217.9	1.26	214.8	1.43
211.7	1.36	190.3	1.27	153.4	1.22	150.4	1.09
142.7	1.34	135.0	1.18	119.7	1.13	110.5	1.02
105.9	.90	101.3	1.40	99.7	1.04	99.7	1.26
81.3	1.21	80.4	1.36	75.2	1.28	73.6	1.10
66.9	.84	64.4	1.12	59.8	1.11	56.8	1.19
47.6	.71	34.7	.63	32.5	.46	23.5	.39
20.3	.18	16.3	.16	12.0	.09	10.7	.09
8.1	.07	6.2	.05	4.8	.03	3.7	.02
3.0	.01	2.6	.02				

PARAMETER VALUES

PS :	2.12	ALPHA :	.023	BETA :	.0036
(1.78,	2.46)	(.021,	.025)	(.0022,	.0049)

SAMPLE TEMPERATURE 7.3 C INCUBATION TEMPERATURE 7.3 C

CHLOROPHYLL :	8.89	RNA :	22.01	PHOSPHATE :	1.18
CARBON :	312.50	DNA :	10.32	NITRATE :	3.53
NITROGEN :	40.00	ATP :	1.66	SILICATE :	6.33
				AMMONIA :	1.63

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 22 11 78 DEPTH 15M

I	P	I	P	I	P	I	P
644.4	.90	629.0	.43	598.4	.66	598.4	.74
506.3	1.19	506.3	1.04	475.6	.69	429.6	1.65
398.9	1.50	352.9	1.31	282.3	1.50	257.8	1.30
251.6	1.70	220.9	1.48	199.5	1.63	162.6	1.39
150.4	1.77	128.9	1.52	127.3	1.65	119.7	1.80
110.5	1.44	105.9	1.27	99.7	1.12	95.1	1.59
81.3	1.33	79.8	1.37	73.6	.97	69.0	1.32
67.5	1.52	64.4	1.28	59.8	1.12	56.8	1.07
46.0	1.07	34.7	.72	30.1	.63	22.7	.40
21.8	.37	12.4	.20	12.3	.23	7.7	.13
7.2	.09	5.3	.07	4.1	.08	3.8	.04
3.1	.01	2.7	.03	1.8	.02		

PARAMETER VALUES

PS :	3.30	ALPHA :	.027	BETA :	.0077
	(2.47, 4.13)		(.024, .029)		(.0041, .0114)

SAMPLE TEMPERATURE 7.3 C INCUBATION TEMPERATURE 7.3 C

CHLOROPHYLL :	7.61	RNA :	23.35	PHOSPHATE :	1.19
CARBON :	296.00	DNA :	11.87	NITRATE :	3.46
NITROGEN :	40.50	ATP :	1.58	SILICATE :	6.25
				AMMONIA :	1.80

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 07 12 78   DEPTH 5M

I	P	I	P	I	P	I	P
622.0	1.11	583.9	1.73	558.5	1.95	507.8	1.28
490.8	1.88	440.1	1.99	410.4	2.84	389.3	2.65
356.3	2.18	319.5	2.33	277.2	2.72	242.5	2.51
228.5	2.52	224.3	2.37	190.4	2.65	188.3	2.65
184.1	2.25	173.5	2.24	171.4	2.97	143.0	2.67
141.8	3.00	135.4	2.44	133.3	2.91	127.8	2.67
120.6	1.89	116.8	2.68	95.6	2.62	93.5	2.24
88.0	2.34	87.6	2.65	72.4	2.24	67.7	2.62
66.4	2.29	61.4	2.08	57.6	1.58	50.8	2.21
47.8	1.35	30.5	1.03	23.3	.92	17.1	.56
14.6	.29	11.6	.34	8.7	.29	7.1	.24
6.6	.17	4.6	.08	4.2	.07	3.3	.03

PARAMETER VALUES

PS : 3.90	ALPHA : .051	BETA : .0058
(3.43, 4.38)	(.046, .055)	(.0039, .0077)

SAMPLE TEMPERATURE 5.2 C   INCUBATION TEMPERATURE 5.8 C

CHLOROPHYLL :	.77	RNA :	7.06	PHOSPHATE :	1.22
CARBON :	60.00	DNA :	3.78	NITRATE :	3.91
NITROGEN :	10.50	ATP :	.44	SILICATE :	8.33
				AMMONIA :	4.23

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 07 12 78 DEPTH 15M

I	P	I	P	I	P	I	P
643.2	.21	634.7	1.21	579.7	.93	545.8	1.69
516.2	1.57	457.0	1.72	444.3	1.68	370.2	1.95
366.0	2.14	338.5	1.79	294.1	1.75	251.8	1.86
247.5	1.82	233.6	2.09	207.3	1.74	201.0	2.04
194.6	2.00	171.4	2.08	148.1	2.08	146.0	1.85
137.5	2.16	131.2	1.86	124.8	1.88	113.4	1.78
112.1	1.97	105.8	1.92	99.4	1.82	93.1	1.40
91.0	2.05	85.5	1.97	80.4	1.78	78.3	2.14
66.9	1.47	60.9	1.31	60.1	2.09	44.9	.92
36.8	.93	21.8	.58	20.7	.53	12.0	.30
10.2	.24	6.9	.23	5.7	.13	5.0	.14
3.5	.07	3.3	.07	2.1	.04	1.9	.04
1.2	.02						

PARAMETER VALUES

PS : 3.30	ALPHA : .036	BETA : .0057
(2.76, 3.85)	(.033, .040)	(.0035, .0079)

SAMPLE TEMPERATURE 5.2 C INCUBATION TEMPERATURE 5.8 C

CHLOROPHYLL	: 1.27	RNA	: 9.13	PHOSPHATE	: 1.06
CARBON	: 67.00	DNA	: 4.16	NITRATE	: 3.59
NITROGEN	: 13.00	ATP	: .29	SILICATE	: 6.96
				AMMONIA	: 4.35

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 04 01 79 DEPTH 5M

I	P	I	P	I	P	I	P
634.7	2.02	600.8	1.63	600.8	2.26	528.9	3.11
507.8	1.97	444.3	3.21	444.3	2.71	414.7	3.30
385.1	3.25	344.9	2.94	308.9	3.57	262.3	2.72
262.3	2.88	256.0	3.00	213.7	3.06	190.4	2.78
190.4	2.93	171.4	2.88	171.4	2.92	158.7	3.19
148.1	3.21	139.6	2.22	137.5	3.02	135.4	2.57
124.8	1.99	122.7	2.50	105.8	2.67	103.7	2.81
99.4	2.36	97.3	2.95	80.4	2.21	76.2	1.99
71.9	2.32	71.9	2.32	59.2	1.71	57.1	1.81
46.5	2.01	44.4	1.53	30.5	.98	22.4	.73
16.1	.55	9.7	.25	9.3	.32	7.2	.16
6.8	.20	4.7	.09	4.2	.13	3.0	.05
3.0	.04	2.1	.01				

PARAMETER VALUES

PS :	4.78	ALPHA :	.042	BETA :	.0059
(3.93,	5.63)	(.038,	.045)	(.0031,	.0086)

SAMPLE TEMPERATURE 4.3 C INCUBATION TEMPERATURE 5.7 C

CHLOROPHYLL :	.97	RNA :	7.30	PHOSPHATE :	1.26
CARBON :	94.00	DNA :	2.91	NITRATE :	6.89
NITROGEN :	14.50	ATP :	.32	SILICATE :	11.52
				AMMONIA :	3.13

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 04 01 79   DEPTH 8M

T	P	T	P	T	P	T	P
592.4	1.66	592.4	1.78	571.2	1.75	539.5	2.80
486.6	2.46	465.4	2.41	423.1	2.37	423.1	2.93
402.0	3.30	338.5	2.64	296.2	2.06	287.7	3.33
262.3	2.77	224.3	3.61	220.0	2.30	190.4	3.27
190.1	3.08	150.2	3.05	143.9	2.96	135.4	3.23
129.1	2.73	122.7	2.56	122.7	2.87	101.6	3.05
101.6	2.50	93.1	2.91	88.9	2.94	84.6	2.92
82.5	1.87	76.2	2.52	59.2	2.47	55.0	2.42
39.4	1.21	33.0	1.30	19.9	.65	17.4	.71
9.7	.34	9.7	.31	5.9	.15	5.9	.19
3.8	.13	3.8	.10	2.5	.06	2.5	.06
1.7	.03	1.7	.03				

PARAMETER VALUES

PS : 4.38   ALPHA : .054   BETA : .0056

(3.77, 4.99)   (.049, .059)   (.0034, .0079)

SAMPLE TEMPERATURE 4.4 C   INCUBATION TEMPERATURE 5.7 C

CHLOROPHYLL	:	1.27	RNA	:	7.67	PHOSPHATE	:	1.21
CARBON	:	83.00	DNA	:	1.05	NITRATE	:	6.77
NITROGEN	:	13.50	ATP	:	.43	SILICATE	:	10.98
						AMMONIA	:	2.78

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 17 01 79 DEPTH 5M

I	P	I	P	I	P	I	P
613.5	1.21	592.3	1.34	550.1	2.63	465.4	2.61
448.5	2.99	444.3	2.71	421.0	2.29	402.0	2.86
332.2	3.00	315.2	3.09	306.8	2.82	277.2	2.73
234.8	2.72	232.7	2.96	222.1	3.01	192.5	2.76
169.2	2.80	167.1	2.59	162.9	2.71	133.3	2.60
129.0	2.97	116.4	2.25	106.6	2.66	98.2	1.95
91.0	2.55	80.4	2.42	77.0	1.95	67.7	2.79
63.5	2.53	61.4	1.58	57.1	2.22	48.6	1.45
42.3	1.10	38.9	1.06	37.4	1.67	34.5	1.73
33.8	.93	29.6	.79	25.8	1.32	25.6	1.35
23.9	.67	20.7	.58	18.8	1.03	18.2	.91
17.6	.44	16.1	.36	15.0	.69	14.4	.68
14.0	.29	12.7	.30	11.5	.42	11.5	.46
10.9	.21	9.7	.20	9.5	.15	9.1	.33
9.1	.32	8.8	.26	7.8	.13	7.0	.11
6.9	.23	6.8	.21	6.3	.08	5.6	.17
5.2	.17	4.9	.11				

PARAMETER VALUES

PS :	5.01	ALPHA :	.043	BETA :	.0079
(4.04,	5.97)	(.040,	.046)	(.0043,	.0114)

SAMPLE TEMPERATURE 2.4 C INCUBATION TEMPERATURE 4.5 C

CHLOROPHYLL :	1.43	RNA :	11.34	PHOSPHATE :	1.06
CARBON :	72.00	DNA :	3.01	NITRATE :	7.22
NITROGEN :	12.50	ATP :	.43	SILICATE :	11.07
				AMMONIA :	3.05

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 17 01 79 DEPTH 18M

I	P	I	P	I	P	I	P
634.7	1.05	613.5	.50	528.9	1.16	528.9	1.80
476.0	2.06	465.4	1.41	444.3	1.37	418.9	2.00
399.8	2.21	325.8	2.15	313.1	2.27	308.9	2.04
279.3	1.59	256.0	2.45	236.9	2.40	198.9	2.00
177.7	2.48	177.7	2.06	177.7	1.82	133.3	2.08
133.3	2.25	100.3	1.86	99.4	1.80	97.3	2.19
93.1	1.87	81.2	1.79	78.3	2.00	78.3	1.77
63.5	1.41	62.2	1.98	59.2	1.49	53.9	1.34
42.3	1.02	41.0	1.13	40.6	1.51	39.4	1.32
32.4	.78	30.9	.91	28.6	1.13	27.9	1.41
23.7	.64	22.6	.68	22.0	1.18	20.7	.94
17.6	.46	17.6	.53	16.7	.78	16.3	.79
13.8	.37	13.1	.41	12.9	.55	11.8	.65
11.2	.32	10.6	.44	9.9	.27	9.7	.52
9.1	.23	8.0	.18	7.8	.35	7.4	.35
7.4	.16	6.6	.13	6.1	.26	6.1	.24
5.3	.15	4.9	.27				

PARAMETER VALUES

PS : 3.62 ALPHA : .040 BETA : .0064

(3.10, 4.14) (.037, .042) (.0043, .0086)

SAMPLE TEMPERATURE 3.2 C INCUBATION TEMPERATURE 4.5 C

CHLOROPHYLL : 1.00 RNA : 9.01 PHOSPHATE : 1.05

CARBON : 69.50 DNA : 3.67 NITRATE : 6.90

NITROGEN : 12.50 ATP : .45 SILICATE : 10.50

AMMONIA : 2.67

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 31 01 79 DEPTH 5M

I	P	I	P	I	P	I	P
634.7	1.48	575.4	1.48	482.4	2.03	457.0	1.90
376.6	1.89	370.2	1.71	298.3	2.19	277.2	2.03
230.6	2.23	220.0	2.10	215.8	2.12	181.9	1.94
162.9	2.05	147.2	1.98	143.9	1.78	133.3	2.03
107.9	1.89	97.3	1.81	93.5	2.06	88.0	1.55
80.4	1.70	68.1	1.48	63.5	1.45	59.4	1.15
57.1	1.35	49.1	1.08	46.5	1.05	44.4	1.00
41.9	.86	34.7	.94	33.4	.80	32.2	.58
30.5	.52	24.5	.40	24.5	.36	24.5	.47
17.3	.35	15.6	.31	13.1	.28	12.4	.21
12.0	.25	10.7	.21	9.7	.19	8.7	.13
8.1	.14	7.6	.12	6.6	.04	6.3	.10
6.0	.08	5.8	.05	4.5	.03	3.9	.04
3.8	.03	3.6	.03	2.9	.01	2.8	.03
2.8	.02	2.5	.02	2.3	.01	2.0	.01
1.8	.01	1.7	.01	1.4	.01	1.3	.00
.9	.00						

PARAMETER VALUES

PS : 3.52 (3.07, 3.98)

ALPHA : .028 (.027, .030)

BETA : .0049 (.0033, .0065)

SAMPLE TEMPERATURE 2.1 C

INCUBATION TEMPERATURE 2.4 C

CHLOROPHYLL :	1.46	RNA :	8.40	PHOSPHATE :	.88
CARBON :	93.50	DNA :	3.12	NITRATE :	7.59
NITROGEN :	15.50	ATP :	.29	SILICATE :	13.97
				AMMONIA :	2.89

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 31 01 79 DEPTH 10M

I	P	I	P	I	P	I	P
613.5	1.99	575.4	2.21	495.1	2.09	444.3	2.49
368.1	2.39	339.8	2.45	302.5	2.57	287.7	2.46
226.4	2.62	215.8	2.41	196.3	2.79	173.5	2.31
164.2	2.71	143.9	2.41	129.0	2.40	121.0	2.73
102.4	2.46	91.8	2.25	89.7	2.14	85.9	2.31
81.2	2.41	65.6	1.72	64.7	1.78	58.4	2.08
58.0	1.74	44.4	1.51	43.2	1.48	42.7	1.36
41.4	1.49	36.0	1.11	35.3	1.15	30.9	.76
30.7	.85	26.4	.66	25.4	.64	17.8	.59
17.3	.58	14.2	.47	14.0	.34	13.5	.44
13.4	.39	10.8	.36	10.4	.36	10.2	.30
9.7	.24	7.6	.24	7.4	.12	7.2	.26
6.7	.13	5.9	.12	5.2	.12	4.6	.07
4.6	.09	3.4	.07	3.3	.05	3.2	.05
3.1	.04	2.4	.02	2.3	.02	2.3	.05
2.2	.02	1.6	.01	1.6	.02	1.6	.24
1.6	.02	1.2	.02	1.1	.24		

PARAMETER VALUES

PS :	3.54	ALPHA :	.042	BETA :	.0033
(3.28,	3.79)	(.041,	.044)	(.0025,	.0042)

SAMPLE TEMPERATURE 2.0 C INCUBATION TEMPERATURE 2.4 C

CHLOROPHYLL :	.85	RNA :	11.45	PHOSPHATE :	.94
CARBON :	82.50	DNA :	4.37	NITRATE :	7.46
NITROGEN :	13.50	ATP :	.20	SILICATE :	12.39
				AMMONIA :	2.54

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 21 02 79 DEPTH 5M

I	P	I	P	I	P	I	P
647.2	1.01	617.6	1.54	609.1	1.45	604.9	.99
452.6	1.24	395.5	1.45	372.2	2.00	325.7	1.62
319.4	1.83	245.3	2.00	239.0	1.73	236.9	1.89
218.7	2.04	179.8	1.89	165.0	2.23	156.5	1.77
148.1	1.62	129.0	2.36	120.6	1.66	113.8	2.59
109.1	1.89	93.1	1.52	76.1	1.62	74.0	1.92
73.6	1.92	67.7	2.13	59.6	1.47	58.4	1.22
53.7	1.24	47.8	1.37	41.9	.93	40.8	1.09
38.1	1.56	33.0	.99	28.1	.86	27.9	.84
23.9	.99	22.2	.93	17.8	.59	17.3	.61
16.7	.57	15.7	.36	12.4	.38	12.3	.55
12.0	.48	11.9	.29	8.8	.48	8.8	.27
8.7	.57	8.7	.11	6.6	.27	5.9	.25
5.5	.17	5.5	.17	4.1	.00	3.9	.15
3.5	.17	2.7	.00				

PARAMETER VALUES

PS : 2.69 ALPHA : .043 BETA : .0035

(2.45, 2.94) (.040, .046) (.0025, .0045)

SAMPLE TEMPERATURE -.3 C INCUBATION TEMPERATURE .2 C

CHLOROPHYLL :	.48	RNA :	5.59	PHOSPHATE :	.96
CARBON :	49.50	DNA :	2.63	NITRATE :	7.29
NITROGEN :	9.00	ATP :	.35	SILICATE :	11.46
				AMMONIA :	1.77

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 21 02 79 DEPTH 25M

I	P	I	P	I	P	I	P
613.5	1.30	592.2	.56	583.7	1.07	461.1	1.28
423.3	1.48	384.9	1.65	342.6	1.59	313.0	2.60
253.9	2.23	249.6	1.81	229.3	1.84	186.1	1.84
181.9	2.41	173.4	2.02	154.4	2.29	141.7	1.77
124.8	1.96	121.8	1.65	110.9	1.73	107.4	1.96
88.8	2.02	87.6	1.61	81.2	1.83	66.4	2.27
65.6	1.92	57.1	1.63	54.6	1.34	49.9	1.86
47.8	1.83	40.3	1.18	39.8	1.26	36.8	1.51
33.4	1.51	28.8	1.17	26.6	.85	26.0	.82
25.4	1.03	19.5	.50	17.6	.62	16.9	.76
16.1	.54	12.8	.43	11.9	.68	11.3	.47
11.1	.39	10.2	.31	8.8	.25	8.2	.35
7.4	.33	6.1	.12	5.9	.17	5.5	.23
5.5	.18	4.1	.04	4.1	.10	3.6	.17
3.5	.27	2.7	.21	2.4	.23	2.1	.02
1.7	.17	1.5	.12	1.3	.08	1.0	.00
1.0	.00						

PARAMETER VALUES

PS : 2.95	ALPHA : .048	BETA : .0049
(2.66, 3.25)	(.045, .051)	(.0035, .0062)

SAMPLE TEMPERATURE .5 C INCUBATION TEMPERATURE .2 C

CHLOROPHYLL :	.52	RNA :	6.45	PHOSPHATE :	.98
CARBON :	53.50	DNA :	3.67	NITRATE :	7.42
NITROGEN :	10.00	ATP :	.31	SILICATE :	11.50
				AMMONIA :	1.38

BEDFORD BASIN

LAT 44 41'30"N   LONG 63 38'30"W   DATE 28 02 79   DEPTH 5M

I	P	I	P	I	P	I	P
579.5	1.01	571.1	.75	571.0	.63	528.8	.41
351.1	1.61	349.0	1.38	319.4	1.04	300.3	1.29
249.6	1.45	241.1	1.79	203.0	1.71	186.1	1.38
165.0	1.61	165.0	1.93	148.0	1.41	141.7	1.64
114.2	1.35	110.8	1.64	103.6	1.36	101.5	1.61
77.0	1.22	71.9	1.36	59.2	1.41	58.4	1.12
50.8	1.29	48.6	1.13	40.6	1.04	38.8	.73
38.5	.95	36.6	.89	32.8	.72	30.4	.80
26.4	.64	24.5	.69	22.8	.72	21.4	.55
15.2	.35	15.0	.34	14.8	.43	14.6	.41
10.4	.23	10.2	.21	9.9	.23	9.8	.28
8.7	.09	7.7	.26	7.4	.09	6.6	.12
5.9	.08	5.5	.11	5.0	.08	4.8	.03
3.7	.03	3.7	.05	3.0	.08	3.0	.09
2.5	.03	2.5	.02	2.1	.00	2.1	.05
1.9	.03	1.9	.00	1.5	.03	1.5	.03
1.5	.05	1.5	.02	1.1	.23	1.1	.14
1.1	.02	1.0	.05	.8	.05	.8	.06

PARAMETER VALUES

PS :	3.16	ALPHA :	.030	BETA :	.0081
(2.66,	3.65)	(.029,	.032)	(.0056,	.0106)

SAMPLE TEMPERATURE .7 C   INCUBATION TEMPERATURE .7 C

CHLOROPHYLL :	.65	RNA :	7.55	PHOSPHATE :	1.38
CARBON :	127.50	DNA :	.30	NITRATE :	11.53
NITROGEN :	16.00	ATP :	-	SILICATE :	20.02
				AMMONIA :	2.84

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 14 03 79 DEPTH 5M

I	P	I	P	I	P	I	P
630.0	.77	609.0	.97	609.0	.68	579.6	.44
415.8	1.07	390.6	1.26	344.4	1.79	315.0	1.36
268.8	1.45	256.2	1.60	222.6	1.69	214.2	1.50
180.6	1.40	168.0	1.60	151.2	1.50	138.6	1.55
107.1	1.79	105.0	1.36	102.9	1.79	88.2	1.45
76.4	1.40	70.1	1.60	68.0	1.65	65.1	1.26
57.5	1.16	54.6	1.02	52.5	1.31	46.2	1.02
41.4	.87	39.1	.92	36.5	.77	32.3	.68
29.0	.82	29.0	.68	24.8	.53	24.8	.48
23.1	.48	21.6	.48	18.1	.34	16.4	.34
13.9	.24	13.6	.29	9.0	.15	9.0	.15
6.5	.10	6.4	.10	4.2	.05	3.6	.05
2.7	.00	2.4	.00	2.0	.00	1.8	.00
1.4	.00	1.4	.05	1.1	.00	1.0	.00

PARAMETER VALUES

PS : 3.19	ALPHA : .030	BETA : .0077
(2.67, 3.71)	(.028, .032)	(.0052, .0101)

SAMPLE TEMPERATURE 1.2 C INCUBATION TEMPERATURE 1.0 C

CHLOROPHYLL :	2.07	RNA :	13.90	PHOSPHATE :	1.44
CARBON :	69.00	DNA :	1.54	NITRATE :	11.32
NITROGEN :	12.00	ATP :	.75	SILICATE :	18.67
				AMMONIA :	-

BEDFORD BASIN

LAT 44 41'30"N LONG 63 38'30"W DATE 14 03 79 DEPTH 10M

I	P	I	P	I	P	I	P
630.0	.54	588.0	.41	546.0	.98	533.4	.85
449.4	1.19	392.7	1.22	386.4	1.37	375.9	1.53
289.8	1.71	270.9	1.58	239.4	1.55	222.4	1.79
195.3	1.48	176.4	1.84	163.8	1.55	147.0	1.71
126.6	1.35	123.9	1.63	108.4	1.40	95.3	1.84
92.4	1.35	87.4	1.53	81.5	1.32	68.5	1.27
63.4	1.48	62.6	1.60	58.8	1.14	52.5	.98
45.4	.85	44.5	1.22	43.3	1.14	37.8	.78
34.2	.91	30.2	.91	29.0	.49	24.8	.47
24.6	.65	23.9	.65	15.3	.36	14.8	.34
11.5	.23	10.7	.21	8.2	.21	7.6	.16
5.0	.08	4.8	.09	3.7	.05	3.4	.08
2.7	.16	2.7	.03	1.9	.03	1.9	.00
1.4	.00	1.3	.00				

PARAMETER VALUES

PS : 3.78	ALPHA : .029	BETA : .0103
(2.90, 4.67)	(.028, .031)	(.0060, .0146)

SAMPLE TEMPERATURE .6 C INCUBATION TEMPERATURE 1.0 C

CHLOROPHYLL	:	3.87	RNA	:	20.61	PHOSPHATE	:	1.52
CARBON	:	83.50	DNA	:	4.32	NITRATE	:	10.32
NITROGEN	:	15.50	ATP	:	1.03	SILICATE	:	18.32
						AMMONIA	:	-

TABLE LEGEND II

Temperature, Salinity and Fluorescence

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 1 DATE: 13/02/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.29	30.50	24.43
2.5	1.32	30.50	24.41
5	1.30	30.50	24.37
10	1.41	30.50	24.36
15	1.23	30.52	24.39
20	1.41	30.56	24.42
25	1.47	-	-
30	1.77	-	-
40	2.42	-	-
50	2.50	-	-
60	2.31	-	-
70	2.31	-	-

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
0	42.0	2.29
5	42.5	2.23
7.5	46.0	2.05
10	46.0	2.05
12.5	44.0	1.41
15	36.0	1.33

SECCHI DEPTH: 7 m

1% LIGHT DEPTH: 16 m

MEAN EXTINCTION COEFF.(5m): 0.265

MEAN EXTINCTION COEFF.(15m): 0.280

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 2 DATE: 15/02/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.19	30.44	24.40
2.5	1.15	30.43	24.39
5	1.13	30.43	24.39
10	1.14	30.44	24.40
15	1.23	30.45	24.41
20	1.39	30.53	24.46
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	62.0	2.41
5	58.0	3.61
7	62.0	3.31
10	57.0	3.25
14	57.0	3.13
17	30.0	1.28

SECCHI DEPTH: 7 m 1% LIGHT DEPTH: 16 m

MEAN EXTINCTION COEFF.(5m): 0.369 MEAN EXTINCTION COEFF.(15m): 0.292

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 3 DATE: 17/02.78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.30	30.42	24.38
2.5	1.25	30.41	24.37
5	1.28	30.45	24.40
10	1.22	30.46	24.41
15	1.38	30.47	24.41
20	1.15	30.54	24.48
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	11.0	0.06
4	33.0	7.68
7	22.0	4.22
10	20.0	-
13	21.0	2.87
17	9.0	1.03

SECCHI DEPTH: 6 m 1% LIGHT DEPTH: 15 m

MEAN EXTINCTION COEFF.(5m): 0.398 MEAN EXTINCTION COEFF.(15m): 0.324

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 4 DATE: 22/02/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.17	30.34	24.32
2.5	1.18	30.34	24.32
5	1.17	30.37	24.34
10	1.28	30.51	24.45
15	1.43	30.52	24.45
20	1.35	30.56	24.49
25	1.45	30.47	24.41
30	1.66	30.69	24.57
40	2.15	30.86	24.67
50	2.39	30.97	24.74
60	2.42	30.99	24.76
70	2.18	31.01	24.79

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	27.0	5.42
4	25.0	5.30
7	19.0	4.28
10	10.0	0.94
13	8.0	0.88
17	10.0	0.90

SECCHI DEPTH: 6 m 1% LIGHT DEPTH: 15 m

MEAN EXTINCTION COEFF.(5m): 0.348 MEAN EXTINCTION COEFF.(15m): 0.317

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 5   DATE: 22/02/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	0.88	30.42	24.40
2.5	0.88	30.42	24.40
5	0.86	30.42	24.40
10	0.90	30.42	24.40
15	0.99	30.43	24.40
20	1.20	30.54	24.48
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	22.0	4.88
4	24.0	5.06
7	24.0	4.82
10	25.0	4.52
13	24.0	5.12
17	22.0	4.70

SECCHI DEPTH: 5 m   1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.377   MEAN EXTINCTION COEFF.(15m): 0.330

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 6 DATE: 24/02/78

Depth m	Temperature °C	Salinity °/₀₀	Density σ_t
0	0.96	30.44	24.41
2.5	1.05	30.44	24.41
5	0.97	30.44	24.41
10	0.98	30.44	24.41
15	1.01	30.43	24.40
20	1.05	30.45	24.41
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	24.0	5.06
4	26.0	4.58
7	26.0	4.70
10	26.0	4.52
13	25.0	4.94
17	23.0	4.88

SECCHI DEPTH: 6 m

1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.356

MEAN EXTINCTION COEFF.(15m): 0.335

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 7 DATE: 27/02/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.43	30.44	24.38
2.5	1.07	30.44	24.40
5	1.00	30.45	24.42
10	1.06	30.50	24.45
15	1.24	30.55	24.48
20	1.32	30.64	24.55
25	1.18	30.62	24.54
30	1.30	30.72	24.62
40	2.12	30.87	24.68
50	2.33	30.94	24.72
60	2.37	30.95	24.73
70	1.56	30.89	24.74

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	14.0	3.44
4	40.0	10.18
7	38.0	9.18
10	33.0	7.51
13	17.0	3.01
17	13.0	2.65

SECCHI DEPTH: 7 m

1% LIGHT DEPTH: 17 m

MEAN EXTINCTION COEFF.(5m): 0.290

MEAN EXTINCTION COEFF.(15m): 0.275

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 8   DATE: 01/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.30	30.47	24.42
2.5	1.17	30.42	24.38
5	1.10	30.42	24.39
10	1.05	30.48	24.44
15	1.07	30.58	24.52
20	1.20	30.69	24.59
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	26.0	6.81
7	29.0	6.63
4	31.0	6.93
10	23.0	5.60
13	21.0	5.36
17	18.0	4.28

SECCHI DEPTH: 6 m   1% LIGHT DEPTH: 16 m

MEAN EXTINCTION COEFF.(5m): 0.218   MEAN EXTINCTION COEFF.(15m): 0.262

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 9 DATE: 03/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.00	30.50	24.46
2.5	0.94	30.48	24.44
5	0.90	30.48	24.45
10	0.93	30.53	24.48
15	1.10	30.62	24.55
20	1.25	30.74	24.64
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	14.0	5.42
4	17.0	5.42
7	16.0	5.12
10	11.0	4.58
13	13.0	3.73
17	12.0	3.80

SECCHI DEPTH: 6 m

1% LIGHT DEPTH: 16 m

MEAN EXTINCTION COEFF.(5m): 0.326

MEAN EXTINCTION COEFF.(15m): 0.291

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 10 DATE: 06/08/78

Depth m	Temperature °C	Salinity °/₀₀	Density σ_t
0	0.56	30.61	24.57
2.5	0.57	30.61	24.57
5	0.54	30.61	24.57
10	0.74	30.61	24.56
15	0.56	30.62	24.58
20	0.64	30.61	24.56
25	0.99	30.77	24.67
30	1.32	30.88	24.74
40	1.13	30.92	24.79
50	1.00	30.96	24.83
60	1.10	30.98	24.84
70	0.99	30.98	24.85

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	29.0	6.44
4	29.0	6.21
7	28.0	6.33
10	27.0	6.15
13	26.0	6.33
17	25.0	6.21

SECCHI DEPTH: 7 m

1% LIGHT DEPTH: 21 m

MEAN EXTINCTION COEFF.(5m): 0.178

MEAN EXTINCTION COEFF.(15m): 0.210

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 11   DATE: 08/03/78

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	0.68	30.63	24.58
2.5	0.67	30.63	24.58
5	0.63	30.63	24.58
10	0.61	30.64	24.59
15	0.69	30.66	24.60
20	0.75	30.71	24.60
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	21.0	8.52
4	25.0	8.68
7	26.0	8.35
10	26.0	8.85
13	25.0	8.52
17	24.0	7.35

SECCHI DEPTH: 6 m   1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.351   MEAN EXTINCTION COEFF.(15m): 0.320

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 12 DATE: 10/03/78

Depth m	Temperature °C	Salinity °/₀₀	Density σ_t
0	1.08	30.66	24.58
2.5	1.02	30.66	24.58
5	0.84	30.66	24.59
10	0.82	30.71	24.63
15	0.97	30.75	24.66
20	0.89	30.84	24.74
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	14.0	7.68
4	33.0	10.35
7	35.0	9.18
10	26.0	7.84
13	20.0	7.35
17	14.0	4.40

SECCHI DEPTH: 5 m 1% LIGHT DEPTH: 17 m

MEAN EXTINCTION COEFF.(5m): 0.286 MEAN EXTINCTION COEFF.(15m): 0.273

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 13 DATE: 13/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.29	30.74	24.63
2.5	1.24	30.74	24.64
5	1.14	30.75	24.65
10	1.10	30.76	24.66
15	1.14	30.78	24.67
20	1.03	30.88	24.76
25	1.00	30.96	24.83
30	1.03	30.98	24.83
40	1.04	31.02	24.90
50	1.04	31.05	24.90
60	1.11	31.10	24.93
70	1.07	31.13	24.96

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	39.0	13.36
4	45.0	12.02
7	44.0	12.02
10	39.0	12.52
13	36.0	11.52
17	19.0	6.18

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 13 m

MEAN EXTINCTION COEFF.(5m): 0.369

MEAN EXTINCTION COEFF.(15m): 0.322

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 14 DATE: 15/03/78

Depth m	Temperature °C	Salinity ‰	Density σ_t
0	1.41	30.73	24.62
2.5	1.40	30.72	24.61
5	1.27	30.74	24.63
10	1.28	30.78	24.67
15	1.25	30.86	24.73
20	1.12	30.88	24.75
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	48.0	16.36
4	61.0	16.86
7	51.0	16.20
10	45.0	14.69
13	30.0	10.85
17	24.0	8.85

SECCHI DEPTH: 5 m 1% LIGHT DEPTH: 11 m

MEAN EXTINCTION COEFF.(5m): 0.511 MEAN EXTINCTION COEFF.(15m): 0.412

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 15 DATE: 17/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.21	30.68	24.59
2.5	1.22	30.67	24.58
5	1.20	30.68	24.59
10	1.22	30.68	24.59
15	1.33	30.70	24.60
20	1.14	30.90	24.77
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	24.0	22.71
4	29.0	26.72
7	28.0	22.71
10	28.0	22.04
13	28.0	25.38
17	27.0	25.05

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 9 m

MEAN EXTINCTION COEFF.(5m): 0.558 MEAN EXTINCTION COEFF.(15m): 0.466

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 16 DATE: 20/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.10	30.68	24.60
2.5	1.09	30.67	24.60
5	1.06	30.68	24.60
10	1.08	30.68	24.60
15	1.13	30.70	24.61
20	1.01	30.73	24.64
25	1.06	30.97	24.83
30	1.04	31.00	24.86
40	0.99	31.03	24.88
50	1.10	31.08	24.92
60	1.16	31.10	24.93
70	1.06	31.10	24.93

Depth m	In Vivo Fluorescence x(3)	Chlorophyll $mg\ m^{-3}$
1	19.0	22.71
4	28.0	25.05
7	31.0	22.04
10	27.0	22.04
13	28.0	23.71
17	25.0	22.71

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 8 m

MEAN EXTINCTION COEFF.(5m): 0.645 MEAN EXTINCTION COEFF.(15m): 0.495

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 17 DATE: 23/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.58	29.42	23.56
2.5	1.33	30.15	24.16
5	1.29	30.46	24.17
10	1.30	30.66	24.57
15	1.40	30.68	24.58
20	1.17	30.82	24.70
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	14.0	11.45
4	25.0	22.04
7	29.0	25.71
10	24.0	22.38
13	24.0	23.38
17	21.0	24.71

SECCHI DEPTH: 2.5 m 1% LIGHT DEPTH: -

MEAN EXTINCTION COEFF.(5m): - MEAN EXTINCTION COEFF.(15m): -

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 18 DATE: 28/03/78

Depth m	Temperature °C	Salinity °/₀₀	Density σ_t
0	3.15	29.64	23.63
2.5	1.71	30.02	24.03
5	1.58	30.22	24.20
10	1.48	30.45	24.40
15	1.51	30.52	24.44
20	1.33	30.64	24.55
25	1.27	30.76	24.65
30	1.20	30.89	24.76
40	1.09	31.01	24.86
50	1.02	31.06	24.90
60	1.29	31.08	24.91
70	1.19	31.09	24.92

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	15.0	12.69
4	22.0	7.35
7	18.0	8.43
10	18.0	13.69
13	18.0	12.77
17	17.0	10.36

SECCHI DEPTH: 4 m

1% LIGHT DEPTH: 9 m

MEAN EXTINCTION COEFF.(5m): 0.586

MEAN EXTINCTION COEFF.(15m): 0.477

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 19 DATE: 31/03/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	2.91	26.34	21.02
2.5	2.17	29.94	23.94
5	1.65	30.19	24.17
10	1.42	30.45	24.39
15	1.47	30.56	24.48
20	1.24	30.70	24.60
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	20.0	4.56
4	20.0	4.69
7	40.0	8.51
10	45.0	10.49
13	26.0	9.50
17	25.0	9.88

SECCHI DEPTH: 3.5 m 1% LIGHT DEPTH: 11 m

MEAN EXTINCTION COEFF.(5m): 0.551 MEAN EXTINCTION COEFF.(15m): 0.420

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 20 DATE: 03/04/78

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	1.76	29.40	23.53
2.5	1.67	29.60	23.70
5	1.42	30.03	24.06
10	1.34	30.29	24.27
15	1.33	30.67	24.57
20	1.10	30.85	24.73
25	1.10	30.86	24.74
30	1.08	30.91	24.83
40	1.01	31.01	24.86
50	1.06	31.06	24.90
60	1.14	31.08	24.91
70	1.07	31.09	24.93

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	13.0	8.15
4	19.0	8.27
7	31.0	8.76
10	33.0	9.87
13	32.0	9.99
17	31.0	11.23

SECCHI DEPTH: 4.5 m

1% LIGHT DEPTH: 9 m

MEAN EXTINCTION COEFF.(5m): 0.542

MEAN EXTINCTION COEFF.(15m): 0.455

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 21 DATE: 05/04/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.65	29.48	23.60
2.5	1.61	29.56	23.67
5	1.56	29.64	23.74
10	1.55	29.83	23.89
15	1.40	30.68	24.58
20	1.14	30.81	24.70
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	52.0	7.78
5	59.0	8.64
7	60.5	9.01
10	65.0	9.38
17	58.5	8.64

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 10 m

MEAN EXTINCTION COEFF.(5m): 0.549 MEAN EXTINCTION COEFF.(15m): 0.417

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 22 DATE: 07/04/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	2.15	28.52	22.81
2.5	1.85	28.74	23.00
5	1.55	29.76	23.82
10	1.20	30.35	24.33
15	1.06	30.68	24.60
20	1.06	30.79	24.69
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	27.5	8.35
4	44.5	11.00
7	43.5	17.09
10	34.0	9.47
13	35.5	8.08
17	28.0	7.80

SECCHI DEPTH: 3.5 m

1% LIGHT DEPTH: 12 m

MEAN EXTINCTION COEFF.(5m): 0.508

MEAN EXTINCTION COEFF.(15m): 0.374

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 23   DATE: 10/04/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	3.27	-	-
2.5	2.04	29.25	23.40
5	1.31	30.31	24.29
10	1.13	30.62	24.55
15	1.03	30.74	24.65
20	1.07	30.79	24.69
25	0.89	30.89	24.78
30	0.93	30.90	24.78
40	1.11	31.06	24.90
50	1.12	31.07	24.91
60	1.23	31.08	24.91
70	1.14	31.10	24.93

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	18.0	3.20
4	25.0	3.48
7	49.0	8.08
10	42.0	5.57
13	36.0	6.68
17	37.0	7.38

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 12 m

MEAN EXTINCTION COEFF.(5m): 0.463

MEAN EXTINCTION COEFF.(15m): 0.366

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 24 DATE: 14/04/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	3.80	26.67	21.22
2.5	3.36	29.21	23.27
5	1.84	29.85	23.89
10	1.18	30.55	24.49
15	0.98	30.78	24.68
20	1.10	30.81	23.70
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	17.0	4.47
10	18.0	5.57
17	17.0	4.27

SECCHI DEPTH: 5 m 1% LIGHT DEPTH: 17 m

MEAN EXTINCTION COEFF.(5m): 0.421 MEAN EXTINCTION COEFF.(15m): 0.274

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 25 DATE: 19/04/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	4.53	28.16	22.34
2.5	2.09	30.02	24.01
5	1.47	30.45	24.39
10	1.15	30.74	24.64
15	0.97	30.84	24.73
20	1.04	30.88	24.76
25	0.96	30.90	24.78
30	0.86	30.94	24.82
40	1.06	31.00	24.85
50	0.85	31.01	24.87
60	1.14	31.05	24.89
70	1.30	31.06	24.89

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	16.0	3.32
4	20.0	3.22
7	24.0	7.38
10	32.0	5.57
13	37.0	6.96
17	23.0	3.12

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 13 m

MEAN EXTINCTION COEFF.(5m): 0.377

MEAN EXTINCTION COEFF.(15m): 0.346

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 26   DATE: 26/04/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	3.25	28.89	23.02
2.5	3.24	28.90	23.03
5	2.18	30.01	23.99
10	1.61	30.50	24.42
15	1.30	30.65	24.56
20	1.16	30.77	24.66
25	1.03	30.79	24.69
30	0.96	30.89	24.77
40	0.88	30.96	24.83
50	0.96	31.01	24.87
60	1.00	31.03	24.88
70	1.18	31.05	24.89

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	22.0	5.84
4	31.0	6.68
7	23.0	6.13
10	11.0	3.96
13	10.0	2.86
17	12.0	3.27

SECCHI DEPTH: 4 m   1% LIGHT DEPTH: 12 m

MEAN EXTINCTION COEFF.(5m): 0.425   MEAN EXTINCTION COEFF.(15m): 0.353

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 27 DATE: 03/05/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	4.21	28.29	22.47
2.5	2.91	29.88	23.84
5	2.61	29.98	23.94
10	1.65	30.44	24.37
15	1.34	30.62	24.39
20	1.10	30.75	24.65
25	0.93	30.80	24.70
30	0.94	30.86	24.75
40	0.90	30.97	24.84
50	0.97	31.00	24.86
60	1.00	31.01	24.87
70	1.15	31.04	24.88

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	26.0	3.90
4	35.0	6.96
7	33.0	6.13
10	33.0	5.57
13	31.0	4.73
17	26.0	4.18

SECCHI DEPTH: 6 m

1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.383

MEAN EXTINCTION COEFF.(15m): 0.323

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 28 DATE: 10/05/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	7.40	28.47	22.26
2.5	5.96	29.30	23.09
5	4.00	29.99	23.83
10	2.63	30.34	24.22
15	2.03	30.50	24.39
20	1.29	30.76	24.65
25	1.00	30.82	24.71
30	0.95	30.88	24.76
40	0.91	30.94	24.81
50	0.98	30.98	24.84
60	1.01	31.03	24.86
70	1.18	31.03	24.87

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	36	5.84
10	32	8.63
17	20	3.20

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.410

MEAN EXTINCTION COEFF.(15m): 0.315

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 29 DATE: 17/05/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	10.08	26.98	20.72
2.5	7.98	28.83	22.47
5	6.04	29.66	23.36
10	3.50	30.17	24.02
15	2.19	30.50	24.38
20	1.66	30.69	24.57
25	1.60	30.75	24.62
30	1.08	30.84	24.73
40	1.02	30.94	24.81
50	1.08	30.98	24.84
60	1.11	31.00	24.85
70	1.06	31.02	24.87

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	47.0	4.46
4	67.0	8.49
7	50.0	9.47
10	31.0	4.87
13	23.0	0.99
17	23.0	0.84

SECCHI DEPTH: 3 m 1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.614 MEAN EXTINCTION COEFF.(15m): 0.418

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 30 DATE: 24/05/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	8.42	28.86	22.43
2.5	7.82	28.91	22.55
5	5.88	29.49	23.45
10	4.52	30.04	23.82
15	3.34	30.43	24.24
20	2.68	30.59	24.42
25	2.10	30.67	24.53
30	1.14	30.80	24.69
40	1.02	30.91	24.78
50	1.04	30.96	24.82
60	1.04	30.98	24.84
70	1.06	31.02	24.87

Depth m	In Vivo Fluorescence x( )	Chlorophyll mg m^{-3}

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 11 m

MEAN EXTINCTION COEFF.(5m): 0.486 MEAN EXTINCTION COEFF.(15m): 0.377

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 31 DATE: 31/05/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0			
2.5			
5			
10			
15			
20			
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x( )	Chlorophyll mg m^{-3}

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: -

MEAN EXTINCTION COEFF.(5m): - MEAN EXTINCTION COEFF.(15m): -

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 32 DATE: 14/06/78

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	12.26	29.21	22.08
2.5	11.98	29.24	22.15
5	9.42	29.65	22.90
10	4.08	30.48	24.21
15	3.58	30.69	24.43
20	3.28	30.74	24.49
25	2.86	30.77	24.55
30	1.58	30.85	24.70
40	1.08	30.92	24.79
50	1.05	30.97	24.83
60	1.10	30.98	24.84
70	1.15	30.99	24.84

Depth m	In Vivo Fluorescence x( )	Chlorophyll mg m^{-3}

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.463 MEAN EXTINCTION COEFF.(15m): 0.320

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 33 DATE: 21/06/78

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0			
2.5			
5			
10			
15			
20			
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x( )	Chlorophyll mg m^{-3}

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 13 m

MEAN EXTINCTION COEFF.(5m): 0.358

MEAN EXTINCTION COEFF.(15m): 0.332

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 34 DATE: 28/06/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	14.26	29.22	21.70
2.5	13.54	29.27	21.89
5	6.31	30.43	23.94
10	4.11	30.69	24.38
15	3.63	30.80	24.51
20	3.11	30.87	24.61
25	2.84	30.95	24.69
30	1.88	30.96	24.77
40	1.68	31.00	24.82
50	1.71	31.03	24.84
60	1.86	31.09	24.88
70	1.86	31.11	24.89

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	8.5	3.62
4	11.0	4.18
7	15.0	7.94
10	35.0	14.98
13	12.0	5.52
17	10.0	6.13

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 12 m

MEAN EXTINCTION COEFF.(5m): 0.307

MEAN EXTINCTION COEFF.(15m): 0.369

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 35 DATE: 05/07/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	13.26	29.43	22.06
2.5	10.96	29.72	22.70
5	4.62	30.70	24.34
10	3.79	30.85	24.53
15	3.08	30.94	24.67
20	2.70	31.02	24.76
25	3.05	31.03	24.74
30	2.47	31.05	24.80
40	2.15	31.05	24.83
50	2.51	31.13	24.86
60	2.38	31.13	24.87
70	2.08	31.12	24.89

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	8.0	1.71
4	15.0	5.85
7	12.0	6.13
10	12.5	5.01
13	14.5	5.85
15	62.0	23.99

SECCHI DEPTH: 5.5 m

1% LIGHT DEPTH: 13 m

MEAN EXTINCTION COEFF.(5m): 0.344

MEAN EXTINCTION COEFF.(15m): 0.342

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 36 DATE: 19/07/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	14.29	30.10	22.37
2.5	11.34	30.28	23.07
5	5.46	30.91	24.41
10	4.36	31.03	24.62
15	4.12	31.05	24.66
20	3.72	31.07	24.72
25	3.66	31.09	24.74
30	2.78	31.07	24.80
40	2.57	31.10	24.84
50	2.62	31.13	24.86
60	2.33	31.12	24.87
70	2.20	31.12	24.88

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	49.0	1.81
4	78.5	5.08
7	76.5	10.86
10	63.0	5.29
13	59.0	3.76
17	53.0	2.64

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.352 MEAN EXTINCTION COEFF.(15m): 0.329

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 37 DATE: 26/07/78

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	13.28	30.40	22.81
2.5	12.60	30.42	22.95
5	9.84	30.60	23.57
10	6.22	30.91	24.32
15	5.18	31.02	24.53
20	4.84	31.04	24.58
25	4.09	31.02	24.68
30	3.22	31.09	24.78
40	2.62	31.11	24.84
50	2.44	31.12	24.86
60	2.32	31.12	24.87
70	2.27	31.12	24.87

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	40.0	3.48
4	77.5	5.85
7	66.5	7.80
10	47.0	5.85
13	40.5	3.76
17	36.5	2.56

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 13 m

MEAN EXTINCTION COEFF.(5m): 0.393

MEAN EXTINCTION COEFF.(15m): 0.324

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 38 DATE: 02/08/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	16.26	30.23	22.05
2.5	15.60	30.30	22.25
5	12.62	30.48	23.00
10	7.12	30.87	24.18
15	5.59	31.00	24.47
20	4.66	31.04	24.60
25	3.62	31.05	24.71
30	3.32	31.06	24.74
40	2.67	31.09	24.82
50	2.54	31.12	24.84
60	2.40	31.12	24.86
70	2.32	31.12	24.87

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	27.0	4.46
4	53.0	11.00
7	23.5	9.33
10	9.5	6.68
13	6.0	3.76
17	5.5	1.61

SECCHI DEPTH: 4 m 1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.388 MEAN EXTINCTION COEFF.(15m): 0.312

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 39 DATE: 16/08/79

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	18.47	30.46	21.71
2.5	16.10	30.49	22.29
5	10.00	30.83	23.73
10	7.76	30.96	24.16
15	7.44	31.00	24.24
20	6.44	31.01	24.38
25	4.52	31.02	24.60
30	3.26	31.06	24.75
40	2.62	31.10	24.83
50	2.53	31.11	24.85
60	2.44	31.11	24.85
70	2.38	31.11	24.86

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	30.5	1.61
4	37.0	2.21
7	46.0	3.76
10	110.0	13.93
13	65.0	2.78
17	46.0	1.16

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 12 m

MEAN EXTINCTION COEFF.(5m): 0.317

MEAN EXTINCTION COEFF.(15m): 0.332

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 40 DATE: 27/09/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	13.73	30.71	22.96
2.5	13.77	30.71	22.95
5	13.70	30.72	22.97
10	12.22	30.88	23.38
15	10.10	31.09	23.91
20	9.16	31.17	24.12
25	8.02	31.19	24.31
30	5.50	31.10	24.56
40	2.98	31.08	24.79
50	2.62	31.10	24.83
60	2.50	31.10	24.84
70	2.56	31.11	24.84

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	4.0	2.47
4	6.0	3.16
7	8.0	4.29
10	61.0	-
13	10.0	8.72
17	4.0	1.49

SECCHI DEPTH: 8 m

1% LIGHT DEPTH: -

MEAN EXTINCTION COEFF.(5m): -

MEAN EXTINCTION COEFF.(15m): -

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 41   DATE: 11/10/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	12.28	30.34	22.95
2.5	12.26	30.45	22.99
5	12.25	30.48	23.06
10	12.28	30.55	23.11
15	12.40	30.60	23.13
20	11.63	30.91	23.51
25	7.74	31.15	24.32
30	5.98	31.12	24.52
40	3.23	31.08	24.77
50	2.66	31.10	24.83
60	2.52	31.11	24.85
70	2.60	31.10	24.83

Depth m	In Vivo Fluorescence x(3)	Chlorophyll mg m^{-3}
1	19.0	15.72
4	25.0	13.67
7	25.0	15.04
10	18.0	15.38
14	15.0	11.96

SECCHI DEPTH: 4 m   1% LIGHT DEPTH: 10 m

MEAN EXTINCTION COEFF.(5m): 0.521   MEAN EXTINCTION COEFF.(15m): 0.392

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 42 DATE: 18/10/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	11.74	29.40	22.32
2.5	12.05	30.20	22.88
5	11.93	30.23	22.93
10	12.06	30.39	23.03
15	11.75	30.59	23.24
20	11.37	30.77	23.45
25	7.94	31.10	24.25
30	6.04	31.12	24.51
40	3.71	31.08	24.72
50	2.77	31.09	24.81
60	2.56	31.10	24.84
70	2.63	31.11	24.84

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	27.0	16.58
4	43.0	16.06
7	32.0	10.77
10	25.0	7.69
13	15.0	2.79
17	13.0	2.57

SECCHI DEPTH: 5 m

1% LIGHT DEPTH: 11 m

MEAN EXTINCTION COEFF.(5m): 0.558

MEAN EXTINCTION COEFF.(15m): 0.376

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 43 DATE: 25/10/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	11.30	29.83	22.73
2.5	11.30	29.84	22.74
5	11.12	29.95	22.85
10	11.49	30.31	23.07
15	11.55	30.52	23.22
20	11.41	30.67	23.36
25	9.16	31.02	23.01
30	6.56	31.12	24.45
40	3.53	31.09	24.75
50	2.88	31.10	24.81
60	2.54	31.10	24.84
70	2.61	31.11	24.84

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	26.0	7.52
4	49.0	11.28
7	37.0	9.23
10	26.0	5.47
13	16.0	2.79
17	9.0	0.88

SECCHI DEPTH: 5 m 1% LIGHT DEPTH: 14 m

MEAN EXTINCTION COEFF.(5m): 0.446 MEAN EXTINCTION COEFF.(15m): 0.325

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 44 DATE: 08/11/78

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	9.68	30.12	23.21
2.5	9.60	30.25	23.34
5	9.56	30.57	23.59
10	8.74	30.90	23.98
15	7.74	31.10	24.28
20	7.52	31.15	24.35
25	7.12	31.18	24.42
30	6.68	31.22	24.51
40	4.40	31.16	24.72
50	3.02	31.11	24.81
60	2.62	31.10	24.83
70	2.68	31.10	24.83

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	60.0	19.14
4	27.0	7.18
7	21.0	4.61
10	12.0	1.64
13	9.0	0.84
17	9.0	0.78

SECCHI DEPTH: 5.5 m 1% LIGHT DEPTH: 19 m

MEAN EXTINCTION COEFF.(5m): 0.326 MEAN EXTINCTION COEFF.(15m): 0.234

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 45 DATE: 15/11/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	8.26	30.67	23.87
2.5	8.27	30.67	23.86
5	8.25	30.67	23.87
10	8.26	30.70	23.89
15	8.14	30.77	23.97
20	7.60	31.09	24.29
25	6.98	31.16	24.43
30	6.38	31.20	24.53
40	3.98	31.13	24.74
50	3.15	31.10	24.79
60	2.72	31.10	24.82
70	2.78	31.10	24.82

Depth m	In Vivo Fluorescence x( )	Chlorophyll mg m^{-3}

SECCHI DEPTH: 6 m

1% LIGHT DEPTH: 16 m

MEAN EXTINCTION COEFF.(5m): 0.254

MEAN EXTINCTION COEFF.(15m): 0.279

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 46 DATE: 22/11/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	7.28	30.66	23.99
2.5	7.31	30.66	23.99
5	7.29	30.66	23.99
10	7.40	30.66	23.98
15	7.28	30.66	23.99
20	7.28	30.66	23.99
25	7.50	30.85	24.11
30	6.50	31.15	24.48
40	4.47	31.14	24.70
50	3.30	31.11	24.78
60	2.72	31.10	24.82
70	2.61	31.10	24.83

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	66.0	8.72
10	68.0	8.72
17	67.0	9.23

SECCHI DEPTH: 7 m

1% LIGHT DEPTH: 17 m

MEAN EXTINCTION COEFF.(5m): 0.275

MEAN EXTINCTION COEFF.(15m): 0.275

BEDFORD BASIN

LATITUDE: 44°31.3'N   LONGITUDE: 63°38.3'W

STATION NO.: 47   DATE: 07/12/78

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	4.71	29.89	23.69
2.5	4.98	30.34	24.01
5	5.16	30.46	24.09
10	5.36	30.60	24.18
15	5.24	30.65	24.23
20	5.21	30.65	24.23
25	5.22	30.66	24.24
30	5.28	30.67	24.24
40	4.94	31.14	24.65
50	3.68	31.12	24.76
60	2.90	31.12	24.83
70	2.68	31.10	24.83

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	20.0	0.76
10	28.0	1.43
17	24.0	0.81

SECCHI DEPTH: 6 m   1% LIGHT DEPTH: 16 m

MEAN EXTINCTION COEFF.(5m): 0.385   MEAN EXTINCTION COEFF.(15m): 0.288

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 48 DATE: 04/01/79

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	3.42	27.70	22.07
2.5	4.22	29.98	23.81
5	4.28	30.33	24.08
10	4.50	30.54	24.23
15	4.44	30.65	24.31
20	4.46	30.70	24.35
25	4.42	30.73	24.38
30	4.26	30.84	24.48
40	4.29	31.06	24.65
50	4.06	31.13	24.73
60	3.79	-	-
70	3.52	31.13	24.78

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	26.0	1.31
10	20.0	0.00
17	18.0	0.34

SECCHI DEPTH: 3 m 1% LIGHT DEPTH: 10 m

MEAN EXTINCTION COEFF.(5m): 0.696 MEAN EXTINCTION COEFF.(15m): 0.421

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 49 DATE: 17/01/79

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	2.29	29.75	23.78
2.5	2.35	29.75	23.78
5	2.42	29.80	23.81
10	2.89	30.09	24.01
15	3.26	30.54	24.34
20	3.20	30.63	24.41
25	3.44	30.72	24.46
30	3.80	30.84	24.53
40	3.82	31.02	24.67
50	3.96	31.06	24.68
60	3.82	31.12	24.74
70	3.70	31.12	24.76

Depth m	In Vivo Fluorescence x( )	Chlorophyll mg m^{-3}

SECCHI DEPTH: 7 m

1% LIGHT DEPTH: 17 m

MEAN EXTINCTION COEFF.(5m): 0.274

MEAN EXTINCTION COEFF.(15m): 0.274

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 50 DATE: 31/01/79

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	2.43	27.06	21.63
2.5	2.42	28.10	22.46
5	2.08	28.72	22.97
10	1.99	30.23	24.18
15	1.99	30.37	24.29
20	2.02	30.43	23.34
25	2.04	30.48	24.38
30	2.80	30.61	24.43
40	2.78	30.83	24.61
50	3.72	31.04	24.69
60	3.66	31.08	24.73
70	3.66	31.09	24.73

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}

SECCHI DEPTH: 3 m 1% LIGHT DEPTH: 10 m

MEAN EXTINCTION COEFF.(5m): 0.613 MEAN EXTINCTION COEFF.(15m): 0.389

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 51 DATE: 21/02/79

Depth m	Temperature °C	Salinity °/₀₀	Density σ_t
0	0.06	30.57	24.56
2.5	0.00	30.57	24.56
5	-0.30	30.58	24.58
10	0.04	30.64	24.62
15	0.25	30.67	24.63
20	0.44	30.70	24.65
25	0.44	30.72	24.66
30	0.46	30.73	24.67
40	0.18	30.76	24.71
50	0.40	30.84	24.76
60	0.24	30.87	24.79
70	0.16	30.94	24.85

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
1	9.0	0.26
10	21.0	1.21

SECCHI DEPTH: 10 m 1% LIGHT DEPTH: 22 m

MEAN EXTINCTION COEFF.(5m): 0.321 MEAN EXTINCTION COEFF.(15m): 0.225

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 52 DATE: 28/02/79

Depth m	Temperature °C	Salinity °/°°	Density σ_t
0	1.10	16.84	13.52
2.5	0.65	29.32	23.53
5	0.70	29.88	23.98
10	0.64	30.36	24.37
15	0.48	30.49	24.48
20	0.44	30.58	24.55
25			
30			
40			
50			
60			
70			

Depth m	In Vivo Fluorescence x(30)	Chlorophyll mg m^{-3}
0.25	73.0	0.36
17	17.0	0.66

SECCHI DEPTH: 2 m 1% LIGHT DEPTH: 12 m

MEAN EXTINCTION COEFF.(5m): 0.449 MEAN EXTINCTION COEFF.(15m): 0.362

BEDFORD BASIN

LATITUDE: 44°31.3'N LONGITUDE: 63°38.3'W

STATION NO.: 53 DATE: 14/03/79

Depth m	Temperature °C	Salinity °/oo	Density σ_t
0	1.16	28.18	22.59
2.5	1.13	28.20	22.61
5	1.22	28.46	22.81
10	0.57	30.36	24.36
15	0.55	30.58	24.54
20	0.46	30.68	24.63
25	0.42	30.73	24.67
30	0.40	30.76	24.70
40	0.52	30.81	24.73
50	0.23	30.85	24.78
60	0.18	30.88	24.80
70	0.14	30.91	24.82

Depth m	In Vivo Fluorescence x(10)	Chlorophyll mg m^{-3}
1	16.0	1.77
17	10.0	0.50

SECCHI DEPTH: 4 m

1% LIGHT DEPTH: 11 m

MEAN EXTINCTION COEFF.(5m): 0.450

MEAN EXTINCTION COEFF.(15m): 0.355

FIGURES

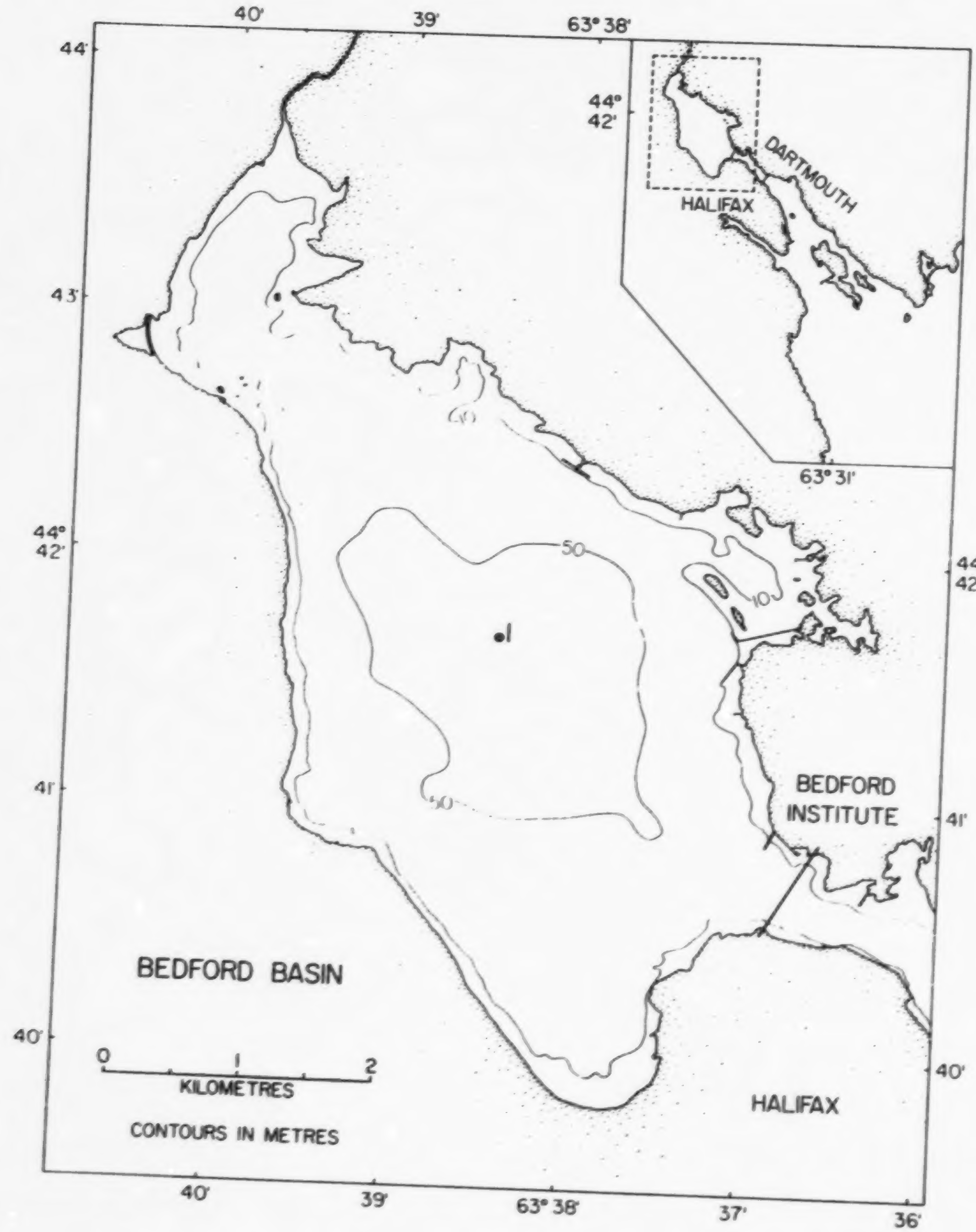

Fig. 1 Location of sampling site in Bedford Basin, N.S.

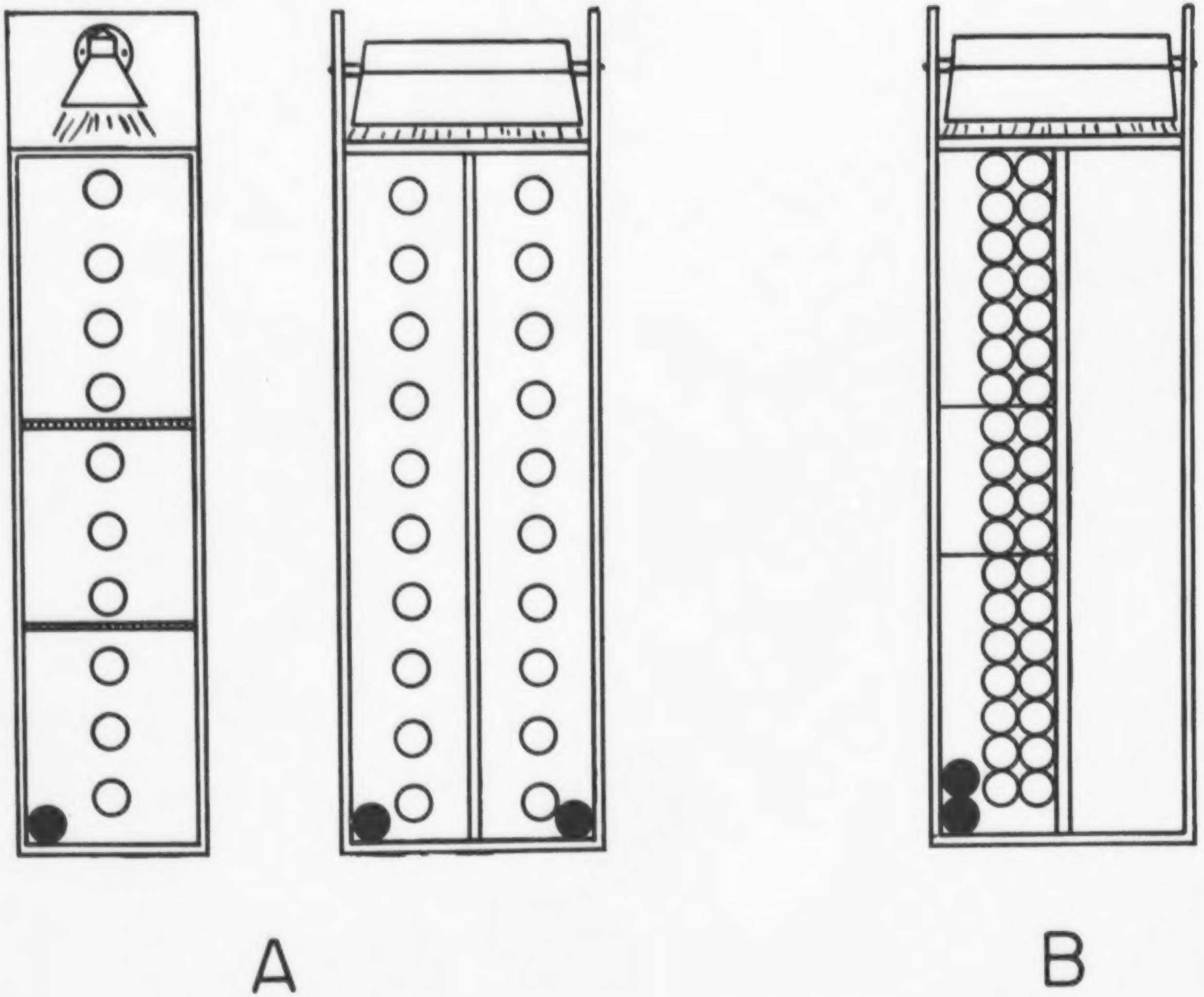

Fig. 2 Arrangement of bottles in incubators from April to September 1978(A) and September 1978 to March 1979(B).

POOR

QUALITY

ORIGINAL